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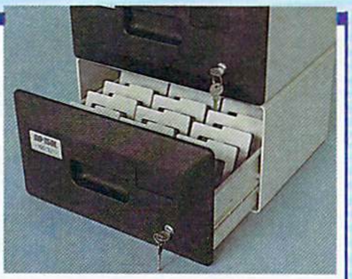
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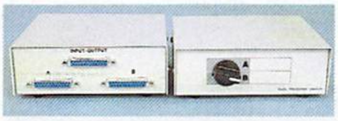
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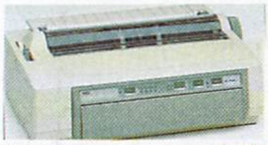
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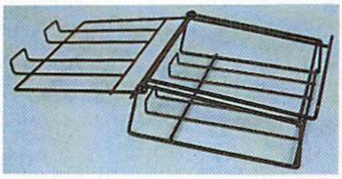
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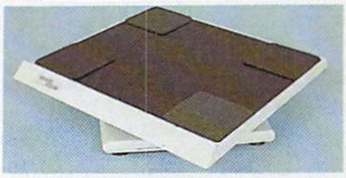
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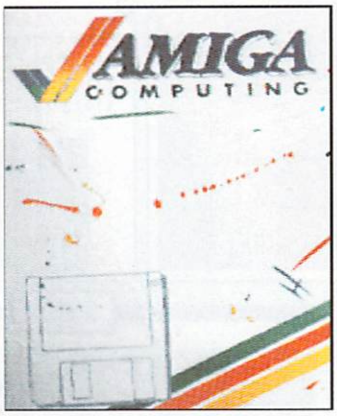
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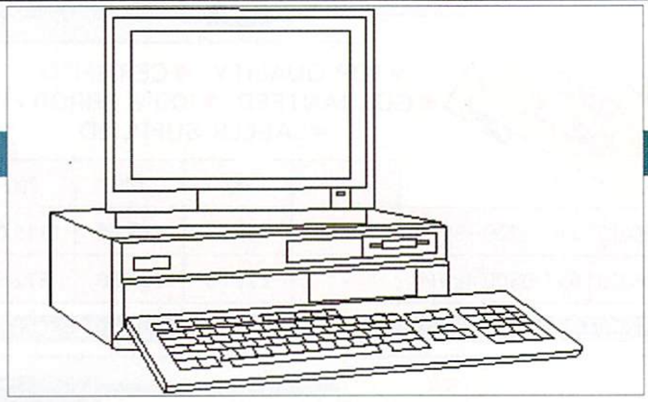
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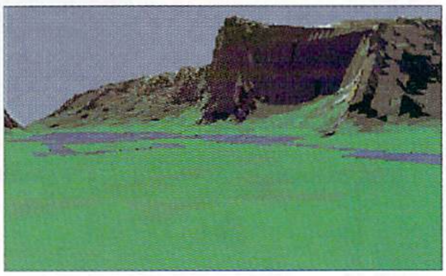
24

Always renowned for its artistic capabilities, this month sees the extension of the Amiga into two new and very different spheres.





PROFESSIONAL DRAW TWO If you want professional results you need professional tools. Now that version two of Pro Draw has been released, are the days of Mac supremacy numbered?



VISTA
No longer confined to research labs, an Amiga-generated virtual reality will enable you to explore the entire universe. In person.

AMIGA SCENE

7 NEWS ROUND-UP

Software houses promise titles for the CDTV, multimedia in education, CAD on the Amiga. Plus news from the 16 bit fair.

GAMES

36 AMIGA ARCADE

Bond is back (again), Imageworks take off with Wings and Gonzo visits the sticks of Manhattan. Do you do? Electrocoin does.

SPECIAL

69 THE WRITE STUFF

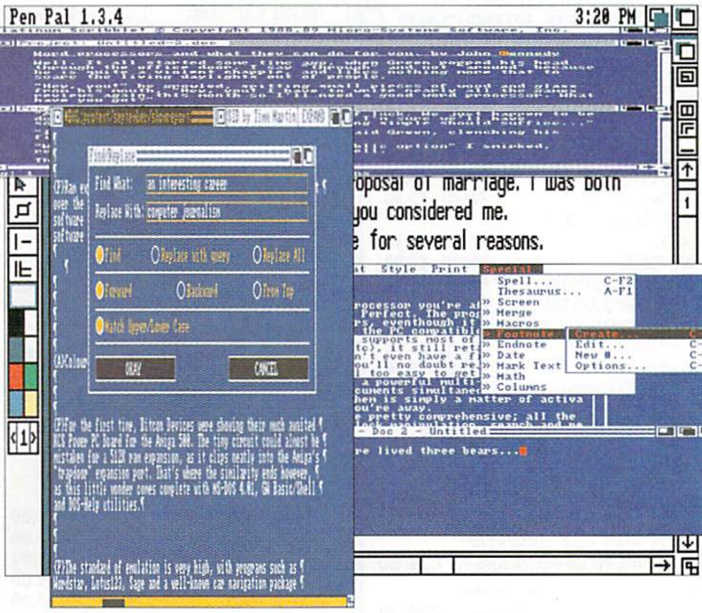
In the second part of our special report on word processing we test the best packages available on the Amiga.

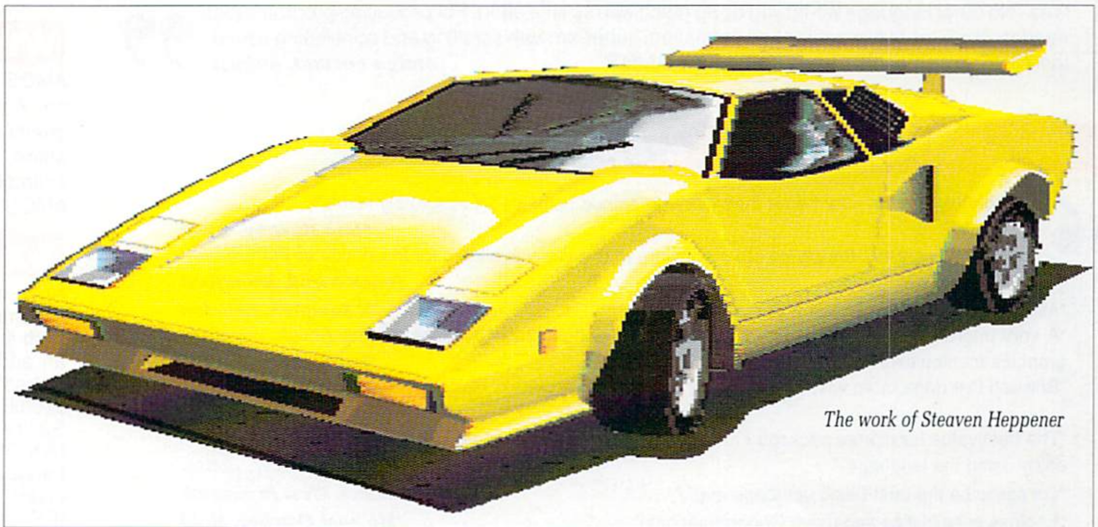
LETTERS

19 EZRA SURF'S POSTBOX

Don't take a risk,
With your printer or disk,
When help must be brisk,
Ezra takes the bisc(uit).







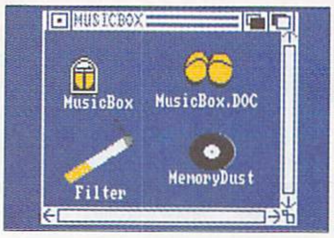
The work of Steaven Heppener





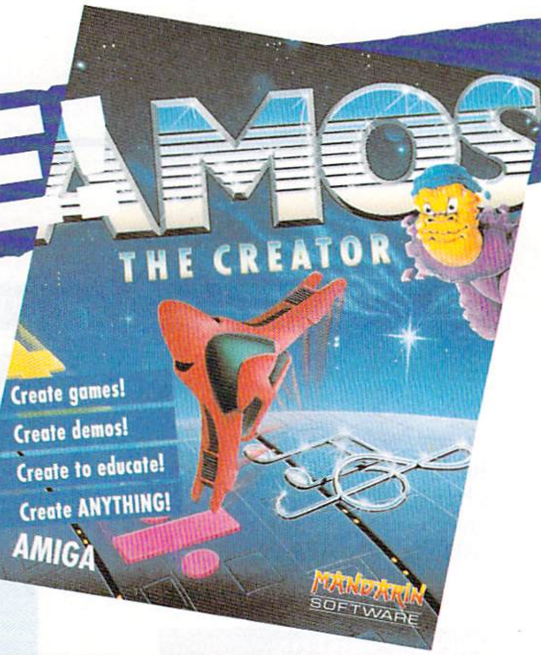






The view of magazines and Amiga owners alike is unanimous: **AMOS – The Creator** is an astonishing piece of software. Now, for the first time, you can exploit to the full the awesome power of your Amiga. Whatever you want to create, AMOS will turn your dreams into reality.

AWESOME!



What the press say:

"It's better than we ever hoped for. It's such an easy system to get to grips with, but staggeringly open-ended, so that any Amiga owner can benefit from it. It's wonderful and worth every penny. Get it – now!" *Popular Computing ...kly, July 5-11*

"A must for Amiga users who would like to be able to develop their own games, but can't face the thought of learning machine code." *ACE, August*

"An incredible product that should create more incredible products. It looks like the days of the machine-code programmer are numbered." *Commodore User, August*

"Can AMOS be used to produce commercial-quality games? The answer seems undoubtedly 'Yes'. No other language will let you do so much with so little effort. For producing programs that need to use ultra-fast graphics and animation, super-smooth scrolling and scintillating sound, there is only one choice... and it's name is AMOS" *Amiga Format, August*

What AMOS owners say:

"Completely brilliant – far better than I ever imagined possible – I absolutely love it" *Liam Murphy, Colne*

"Just bloody great... Simply no other software of this class available for the Amiga or PC" *Simon Nicoll, Blandford*

"AMOS is perfect. The Amiga was made for AMOS" *K Sumpter, Swindon*

"A very impressive package – without doubt the very best Basic available on the Amiga. Incredible graphics manipulation commands" *Paul Feazey, Oxford*

"Brilliant! I've done more with AMOS in four days than with HiSoft Basic in six months!" *JR Arkley, Woolton*

"The best value for money package I have ever bought for the Amiga. I really feel that you want me to enjoy using the language." *Colin Mercer, Bolton*

"On par to be the best Basic language ever." *S Hawkes, West Bromwich*

"Endless possibilities and uses. Congratulations!" *Michael Fletcher, Mold*

"Excellent! Amazing! Brilliant! Superlative! etc etc... I love the commands and ease of use. I understand now why AMOS is called The Creator" *DM Richmond, Blackpool*

"This is going to be the best selling package on the Amiga! It will allow my ideas to come to life" *David Linacre, Chesterfield*

"AMOS is very fast, friendly and no doubt about it, the best program for the Amiga!!" *David Harrigan, Derry*

"As a previous STOS user I can't fault it. Brilliant! François does it again!!!" *Neil Burton, Tidworth*

"Excellent. The speed for a Basic is breathtaking" *Delwyn Farr, Dukinfield*

"Simply awesome – the most impressive piece of coding I have ever seen!" *M Rackley, Stone*

"An excellent job! AMOS is faster than I'd ever dreamed possible!" *David Milton, Welwyn Garden City*

"An absolutely fantastic package that uses the Amiga to its full potential" *NK Ball, Stoke-on-Trent*

"Everything I want to do with the Amiga can be done quickly and easily with AMOS" *Stuart Margerison, Blackburn*

"Fantastic. I knocked up something in a day which would have taken a month in assembler" *Gary Symons, Bournemouth*

"It's the best piece of software I've bought for the Amiga. Worth twice the price." *SA Sweet, Herne Bay*

"AMOS will do for Amiga programming what the invention of fire did for civilisation" *Kevin Smith, Marden*

"Looks set to be the most used piece of software ever on my Amiga" *Martin Bruce, Croyden*

"The best thing that could have happened to the Amiga" *Derek Bere, Fradley*

What AMOS owners are going to create:

"An educational program for motorists... a graphical role-playing game... a Star Trek game... a Mandelbrot explorer... database-type programs... a platform beat-'em-up like Barbarian... scientific programs... a boxing simulation... a conversion of Star Chess... conversions of old Spectrum classics... video titling software... an evolution simulator... printed circuit board designer... a football game... a Speedball-type game... a flight simulator... small business accounts... a cricket management game... a tactical wargame... producing plans of archaeological sites... home finance package... flashy scrolling demos – *and this is just the beginning!*"

Unleash your imagination – get AMOS now!

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Support grows for new CDTV



ON the run-up to the UK launch of Commodore's new CDTV planned for the autumn (see Amiga Scene, August), an increasing number of companies are pledging their support for what has been described as the start of the next computing generation.

Hot on the heels of the American launch at the Consumer Electronics Show in Chicago, CD-rom production firm Next Technology (0223 420222) is busy working on a number of software titles to accompany the UK launch, including the official Welcome disc which will go out with every system.

Already well known for its CD-rom mastering service on the other machines, Next Technology has been called in by Commodore because of its proven track record in this field.

"Next Technology was identified as a leading player in CD-rom technology some time ago in the Commodore CDTV development programme", said Commodore's UK managing director Steve Franklin.

"Their skills in software development and support for other software houses will be invaluable leading up to the launch of CDTV".

Next Technology will support other independent software vendors who are developing applications for CDTV through its unique Pressed for Time CD-rom production service already available for Acorn's Archimedes machines.

Using recordable compact discs, this reduces the cost of developing prototype applications.

"Commodore has stolen a march on the rest of the industry with CDTV and has a real opportunity to become market leader with a product of this type", said Graham Brown-Martin, chairman of Next Technology.

"I am delighted that we are so closely involved in such an innovative product which has the ability to change the face of education, home entertainment and computer-based training".

New players in the CDTV field are unwilling to divulge too much about the software they are developing, but at Mindscape, Geoff Heath told *Amiga Computing:* "We have got four projects which we are working on at present and they will not all be games. It is hoped to have some product ready for September".

It was revealed that one of these will be a CDTV version of Mindscape's World Atlas, a program emminently suited to the multi-media format.

Over at Arcana, Max Taylor said: "We are working on something which is going to fully exploit the multi-media capacity. It will be based on one of our previous games but we at not saying too much about it at present because of the competition.



"We are hoping to have it ready for the launch of CDTV, but in common with some other developers, are having difficulty getting information out of Commodore. We hope to have the product ready for September, but we cannot be definite at present.



"What I can say is that it will be very impressive and we are certainly very excited about the spec for CDTV we have seen so far".

Helped by its CD-rom authoring system, CRL is steaming ahead with three hyper-media games titles for CDTV.

Michael Hodges told *Amiga Computing* that they will probably sell for around £30. They will be Laurel and Hardy, Herewith The Clues and the Druid game Cult of the Severed Head.

Also among developers reported to be hitting the CDTV trail are Impressions, Virgin, Lucasfilm and Mirrorsoft.

Awaiting more information on available software, High Street giant Dixons is remaining non-commital on whether or not it will stock the CDTV. With Commodore predicting that 40 titles will be available by the autumn, Comet has decided to stock the new machine.

Commodore picks sales chief

FOLLOWING the despatch of former retail sales director David Pleasance to head Commodore Electronics in Switzerland (see Amiga Scene, August), CBM has appointed 29-year-old Kelly Sumner to the job of national sales manager for its retail division.

Sumner has been with Commodore for 11 years and was previously national accounts manager. His main responsibilities as head of the retail division will be "to consolidate Commodore's leading position in consumer electronics and to increase its High Street distribution network".

High on his list of priorities will be to mastermind the introduction of products such as Commodore's new console and in particular the CDTV player.

DynaCADD for the Amiga

AIMED at taking the tedious detailed work out of design, Ditek International's 2D and true 3D computer aided design and drafting package DynaCADD is now available on the Amiga from Expressworks (0252 726255).

This general purpose CAD package has been produced for use in electrical, mechanical, architectural and civil applications.

It revises, designs and details drawings in 2D and true 3D, features fast display speeds and can read and write DXF file formats.

With flexible automatic dimension features, all selections are made with the press of a single key for dimensioning in European or American standards.

DynaCADD is compatible with most popular pen plotters, dot matrix, laser and Postscript printers and disk files.

DynaCADD supports Amiga WB1.3, WB2.0, PAL/NTSC and will also be made available in French and German versions.

With the emphasis on ease of use, DynaCADD performs all of the necessary text functions, attributes and manipulation, including the use of professional DTP fonts from AGFA Compugraphic. Price, £650.

CDTV to the rescue



PUPILS at 120 schools in Derbyshire will soon be learning Japanese with the help of Commodore's Amiga-based multi-media system, the CDTV.

Derbyshire County Council's unlikely decision to introduce Japanese into its educational system follows the county's success in attracting the giant Toyota Motor Corporation to build a £700 million assembly plant within its boundaries.

The computerised educational aid has been pioneered by Derby-based Global Learning Systems in partnership with Commodore and the county council. It combinbes hi-fi sound, digitised video computer graphics and text on a single CD-rom and will be used on Commodore's CDTV, expected to be launched in the UK in September.

"This is an extremely exciting educational initiative and was conceived following our coup in attracting Toyota to the county", said leader of Derbyshire County Council, David Bookbinder.

"Our school curriculum is going to include the teaching of Japanese culture, history and languages. By giving our children these options, Derbyshire will be providing the management and supervisory recruits for tomorrow's Japanese factories. "Once the Japanese venture is operating successfully, we will consider how the learning system can be integrated into other curriculum areas".

Chairman of GLS Stuart Webb claimed the new system is a world first for educational technology. "Although the initial project is designed to teach Japanese in Derbyshire schools, our system is also appropriate for business as well as home use", he added.

"We intend to market this exciting learning concept to individiual education authorities, schools and colleges in this country and further afield".

At Commodore, managing director Steve Franklin said: "CDTV will be able to revolutionise educational teaching for all types of students. What it provides is an interactive system at a very affordable price".

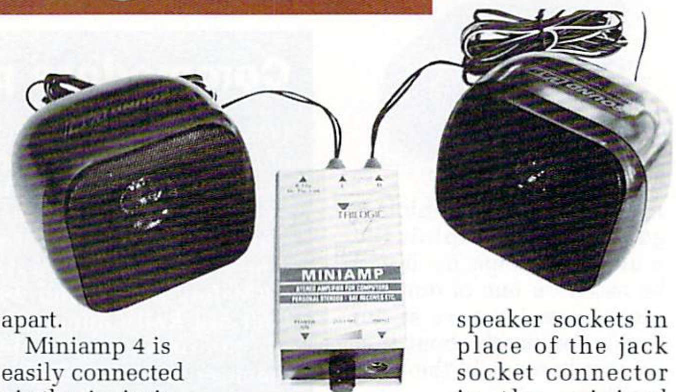
The GLS system links the presentation of both audio and visual information to the responses of students.

It also allows teachers to design and tailor programs to the needs of particular groups or individual pupils.

The software is able to maintain incentive records of personal progress and will be launched at the Nottingham studios of Central Television in September.

Technology at the studios is being used in development work and the system will undergo a trial period before being offered to 120 schools in the county on hardware sponsored by Commodore.

Music power for gamesters



AMIGA owners who hitch up to the new Miniamp 4 stereo speaker system from Trilogic (0274 691115) can give the neighbours real cause for complaint.

The Bradford-based firm claims to have doubled the power output of its previous model while maintaining the same power supply.

By using a low distortion two chip bridge design, Trilogic boasts a hi-fi quality 5 watts per channel output for the system which also includes new compact twin cone speakers which can be placed up to six feet apart.

Miniamp 4 is easily connected via the Amiga's stereo sound sockets and for those who prefer to use their existing hi-fi speakers,

Trilogic has designed in standard two pin DIN loud speaker sockets in place of the jack socket connector in the original model.

Including all leads, headphone adaptor and power pack, the new Miniamp 4 costs £43.99.

Worldwide database

INTERNATIONAL barriers are being eroded all around the world and The Disc Company has taken full account of this with its latest offering, InfoFile – an Amiga database package which is available in 10 languages.

InfoFile boasts a fast processing speed for the manipulation of text, numbers, graphics and sound with rapid search routines and the ability to sort data according to the user's needs.

Included in the package is

a disk filled with 10 ready-made templates so even beginners can start to create their own databases. These include an address file, chequebook, home video library, club membership manager, expense report and inventory manager.

An interesting feature of InfoFile is its desktop presentation function for creating simple sound and graphics slide shows from a database. Also included is the spreadsheet-like ability to define calculations.

Available in English, French, German, Dutch, Spanish, Italian, Danish, Swedish, Norewegian and Finnish, InfoFile costs £24.95. UK distributors are Centresoft, Leisuresoft,Gem, HB Marketing and Multi-Media. The Disc Company's European office is at 9 Rue de Vanves, F-92100 Boulogne Billancourt, France. Tel: 33 1 49 10 99 95.

They've got video taped

G2 SYSTEMS (0252737151) claims to have solved the problem of how to produce a professional quality video output when using an Amiga.

A specialist in interfacing computers to video, G2 has launched VideoCenter, a combination of video mixer, genlocker and PAL encoder.

The VideoCenter mixes incoming PAL video signals with the computer output either using sliding faders or under software control. It also provides a filtered RGB output and has YC inputs and outputs to take full advantage of the SVHS system. Price, £695.

G2 has also brought out an instructional video tape aimed specifically at teaching Amiga owners the basics of recording computer graphics onto tape.

Covering the A500, A1000 and A2000, it includes helpful coding, genlocking and keying routines, outlines many problems faced by beginners and is backed up by graphics.

Launching the tape, G2 partner Greg Hollidge said: "Professional computer graphics are now within the reach of everyone. The Video and the Amiga tape fills an important need by showing the way to even greater use and enjoyment of the best selling Amiga packages".

Video and the Amiga, produced for G2 by Picture Box Television, costs £10.

Spreading further

K-SPREAD 3 and K-Spread 4 from Kuma Computers (0734 844335) are due to be launched in September.

John Day of Kuma told *Amiga Computing* that the new versions boast double the functions of their predecessors.

Among the improvements for the Windows-based programs are a good set of macros of the Excel type which John promises will make them more readily available to "ordinary folk".

The new spreadsheet packages will cost just under £100.

Mouse takes to the buses

CLAIMING a world first, Contriver (0280 822803) has launched a bus mouse which is compatible with five computers.

Called the Contriver Five in One, it works with the Amiga, Atari ST, Schneider and Amstrad PCs and the Commodore PC/3i series.

"Although it's not unusual for serial mice to be compatible with many computers, a vast proportion of computer users prefer to use a serial port for other peripherals and thus have a preference for bus mice", said Contriver boss Adolpho Giannini.

"Those with two or more computers from the five compatible machines will find this mouse a particularly tempting product".

The Contriver Five in One mouse features micro-switches for better response and sells at £29.99 including a mouse pad and pocket.



Cut price graphics

AS *Amiga Computing* went to press, Julian Swallow of HB Marketing received his first consignment of a new price-busting Amiga graphics tablet manufactured in the Far East.

About to launch it to the dealers, he said it will sell at between £150 and £170.

Emulating the features of a SummaGraphics tablet, it is said to be a professional A4 product with more functions than the sketch-type units usually available at this price.

"For its size and quality, it is the cheapest graphics tablet available for the Amiga", said Julian. "We have tried it out with a number of packages and it works very well".

3D Festival prizes

READERS who entered the Amiga animation competition being run by Amiga Centre Scotland in conjunction with the Edinburgh Festival (see Amiga Scene, August) stand a chance of winning the new solid modelling and animation package Real 3D.

Martin Lowe of ACS has opted to award Real 3D to the winners because of its excellent features which include surface mapping, multiple light sources, hierarchical object creation and manipulation and camera fix and follow.

"True solid modelling, working with real solids means you can do such things as perform boolean operations on two objects to make one new object", he said. "IFF pictures or brushes can be mapped onto objects and with user definable brilliancy, an infinate number of surfaces can be created. Super fast ray tracing allows a typical scene with various surface to be rendered in around 15 minutes".

Finalists will also have their work on show at the festival's Animation Exhibition.

Turn your printer green

AMIGA users with green leanings are now being offered three new types of environmentally friendly paper from The Standard Check Book Company, the UK's largest supplier of listing paper.

Checklist, Multilist and Safelist all use 99 per cent of the tree with even the bark being used as fuel. Bleaching is by Hydrogen Peroxide instead of chlorine which can generate highly toxic dioxins.

Checklist and Multilist cost £13.90 and Safelist which is for use with laser printers costs £16.15 per 3000 sheet box. They are available from Action Computer Supplies (0800 333 333).

Genlock in the right spirit

SPIRIT Technology of Salt Lake City, Utah reports that it has now gone into production with the new version of its Interlok genlock encoder for the Amiga. It claims the REV 3 board will be the strongest mid-priced genlock in the Amiga market.

Refinements include a unique circuit design which allows fast forward/reverse search and pause without causing computer crash, a problem in Amiga genlocking systems which take control of computer timing to allow locking to incoming video.

Another useful feature, particularly for artists, is an internal selection system for matching Interlock to the slightly different RGB levels produced by the A1000, A500 and A2000.

This matching capability added to Spirit's encoding makes it possible for Interlock to produce the same colour hues and intensities in encoded video as those displayed on the Amiga RGB colour monitor. Interlok REV 3 is aimed at small studio or high-end home users.

Also new from Spirit is the Fat Trapper 4Mb internal memory expansion board which offers A500 owners 4.5Mb total available ram memory inside their computers.

It expands in 512K increments from 0K to 4Mb which, when added to the 512K on the Amiga motherboard brings the A500 up to 4.5Mb internal ram. Installation is via the plug-in expansion port in the bottom of the A500 normally used for the A501 card or clones thus leaving the 86-pin expansion connector free.

Slightly longer than Commodore's A501 board, Fat Trapper is populated with 256Kx4 chips and allows users to add more memory chips and set address configurations without opening the computer.

As *Amiga Computing* went to press, details of UK availability and pricing were not finalised. For further information ring Spirit Technology on 0101 801 485 4233.

Even more fun at school

DUE out at the end of August is Fun School 3, the successor to Fun School 2 which has sold more than 150,000 copies to become the most successful educational package ever.

Fun School 3 sticks to the winning formula of teaching through fun, but features greatly enhanced graphics and a host of new games.

Age groups have been changed to fit in with the National Curriculum and the three suites of programs cater for under-fives, five-sevens and over-sevens.

Developed by educationalists, the games are designed to teach children numeracy, word skills and comprehension at their own pace at the same time as improving their computer literacy.

For the under-fives there is a collection of six exciting games. Alphabet uses the colourful scenario of a fairground to teach letter recognition and matching, Farm gives free rein to artistic skills with pigs and cows to be coloured, and Gallery is a recognition game in which children have to match pictures with words.

There are also Matching, Actions and Counting which use the Fun School Teddies for interactive learning. An equally exciting collection of games is provided for the older age groups.

"Fun School 2 took the education market by storm, selling more than most commercial games", said managing director of Mandarin Software Chris Payne.

"Our problem was how to top that. We are confident we have managed it with Fun School 3. We have built on the winning formula of Fun School 2 and have worked much harder on the graphical concept. Our educationalists and teachers have also ensured that Fun School 3 is in line with the all-important National Curriculum".

The Amiga version of Fun School 3 costs £24.99.



Caption needed



Caption needed

Shopper Show's a scene stealer

ALREADY the largest event of its type in the world, The Computer Shopper Show is to move to a bigger venue and will be extended to four days this year.

When the doors open at the Wembley Conference Centre on December 6, visitors will also find a quartet of major new feature areas within the show.

Entertainment Shopper will be an Aladdin's cave of computerised playthings:

- Music Shopper will feature the latest in computer music-making with emphasis on MIDI for the Amiga.
- Education Shopper will display the wide range of education software now available.
- Small Business Shopper will be a demonstration and sales area housing major companies offering business hardware and software at the keenest prices.

"One of the benefits of moving the event from Alexandra Palace to Wembley has been that we have virtually doubled the exhibition space available", said Michael Meakin, head of organisers Blenheim Database Exhibitions. "This has allowed us to add these new dimensions.

"It is all part of our continuing policy of ensuring that Shopper remains the leading end-user event on the computer calendar".

Last year's inaugural event packed in more than 26,600 visitors. This year's show is expected to attract 50,000.

Cross compiler upgraded

AMERICAN company Lattice has released a major upgrade to its MSdos to Amigados C cross compiler which is fully compatible with its current Amigados C development system.

The new package includes the complete Amigados C development system and provides the optimizer compiler, libraries and utilities for MSdos which make it possible to create Amiga programs from an MSdos system.

"With the MSdos to Amigados C cross compiler, developers can take advantage of networking, tape backup systems and other hardware facilities of an MSdos system to produce programs which run on an Amiga", said vice president of Lattice, Robert Hansen.

"The cross development system also makes it much easier for programmers to share program source code modules with MSdos programs".

The new system is available in the UK from HiSoft (0525 718181). Price, £718.

Classy stick

AMIGA users who fancy owning a Rolls Royce but can't afford the petrol can now console themselves with what has been billed as the Rolls Royce of joysticks.

DLL (0983 864674) has signed a distribution deal to bring a new range of Advanced Gravis joysticks to the UK. The Amiga version will sell for £44.95.

Amiga rules at the 16 Bit Fair



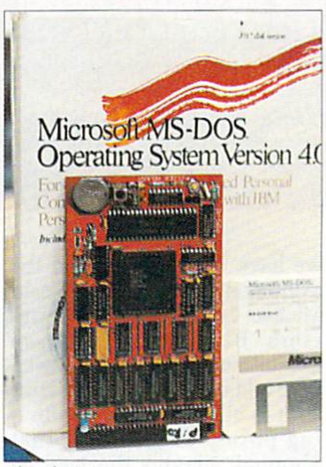
ALTHOUGH quite a small show, the Summer 16 Bit Fair at the Royal Horticultural Halls in London provided plenty of interest for Amiga owners.

Split between two halls, more than 100 exhibitors displayed their wares and made promises regarding future products. The number of Amiga-related stalls easily outnumbered the ST stalwarts.

Ram expansions were rapidly becoming more affordable, with prices hovering just over the £40 mark.

If you were looking for slightly out of date software then you were spoilt for choice, with serious and games software alike going at bargain prices.

For the first time in the UK, Bitcon Devices were showing their much awaited KCS Power PC Board for the Amiga 500. The tiny circuit board could almost be mistaken for a 512K ram expansion as it clips neatly into the Amiga's "trapdoor" expansion port. That's where the similarity ends, however, as this little wonder comes complete with MSdos 4.01, GW Basic/Shell and DOS-Help utilities to turn your Amiga into a PC that will work perfectly with a colour television.



Plug this into your Amiga and you have an XT PC

The standard of emulation is very high, with programs such as Wordstar, Lotus123, Sage and a well-known car navigation package running with no problems whatsoever. It could even run the PC version of Protext.

The Power Board makes good use of Amiga peripherals, directly supporting 3.5 and 5.25in floppy drives. When not in use as a PC emulator it acts as a 1 Mb memory expansion with battery backed up clock. A software upgrade will allow hard drive users to benefit from the card too.

Priced at £320, it is only being held back from immediately release by the lack of a readable manual. Having been translated from Dutch to double Dutch, the English version is still under preparation and will be with us "in days". Of course, *Amiga Computing* will be doing a thorough review as soon as possible.



A genuine Real Thing was on display at RGB studio's stand

Also at the show displaying their wares was Solid State Leisure, a new company specialising in accelerating the Amiga's central processor.

Its card was well demonstrated as it ripped through some Sculpt renderings, using a 16MHz 68020 with a speed of 2 to 3 Mips. Faster cards were available using 20MHz and 25MHz clock speeds.

SSL told us they have even more exciting peripherals on the way. In the run up for Christmas they hope to release a full expansion system for A500 owners and sub-£500 24 bit colour board.

RealThings was proudly demonstrating the latest in its Live- action series, *Birds*. The package helps would-be artists to create life-like animations on their own Amigas.

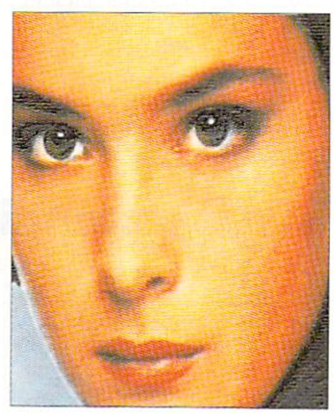
It aims to educate as much as entertain, and Robin Bilson told us he would like to see this as a turning point in computing as users turn towards subjects of a more "green" nature.

It was hard to tell which got more attention at the Arnor stand: Version 4.9 of Protext "the last before v5, really" or the Amiga 3000 it was running on.

The latest incarnation of Protext makes some concessions to Intuition, using more pull-down menus, hot keys and requestors. With split screen editing and (relief!) an improved spelling checker. Version five is due in August with a introductory £125 price tag.

Rombo were showing off two upgrades for its VIDI digitiser. The first was a purely software upgrade to Vidichrome and doubles the resolution by using interlaced HAM mode. As you can see from the example below, results are very impressive.

Perhaps even more impressive was the colour splitter. This small box electronically splits the video signal into the red, blue and green components, which means VIDI can now grab in colour without filters.



Apparently the show was such a success that the next will be held in the slightly more up-market (and hopefully spacious) surroundings of the Novotel, Hammersmith early next year.

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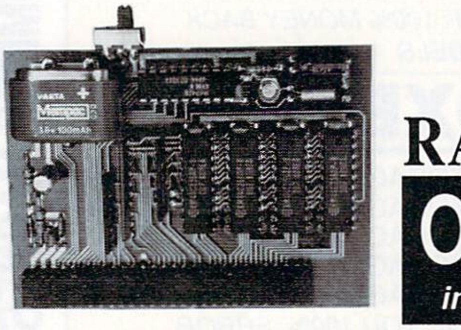
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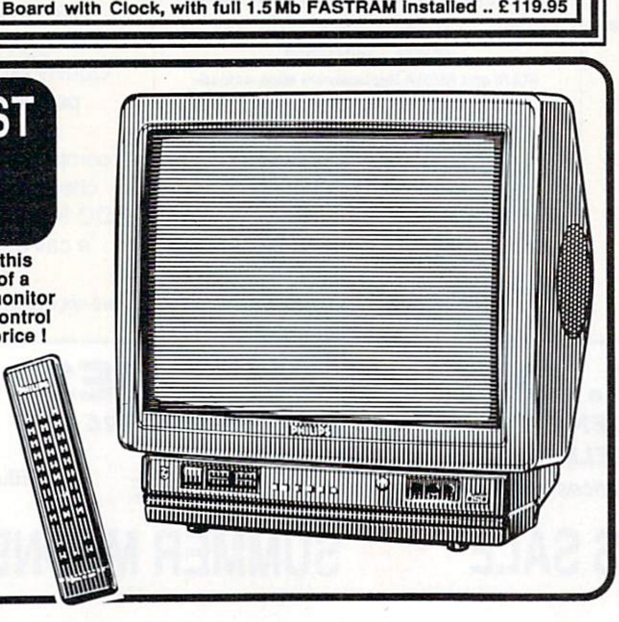
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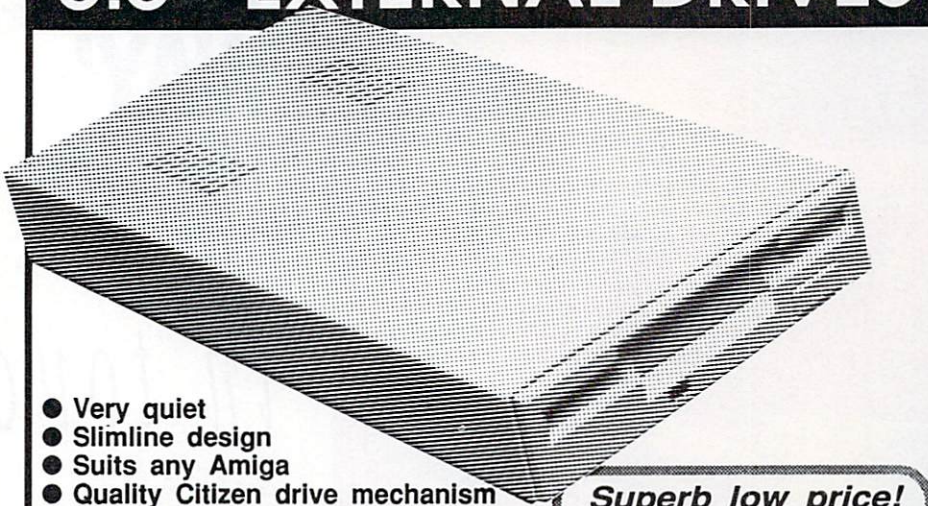
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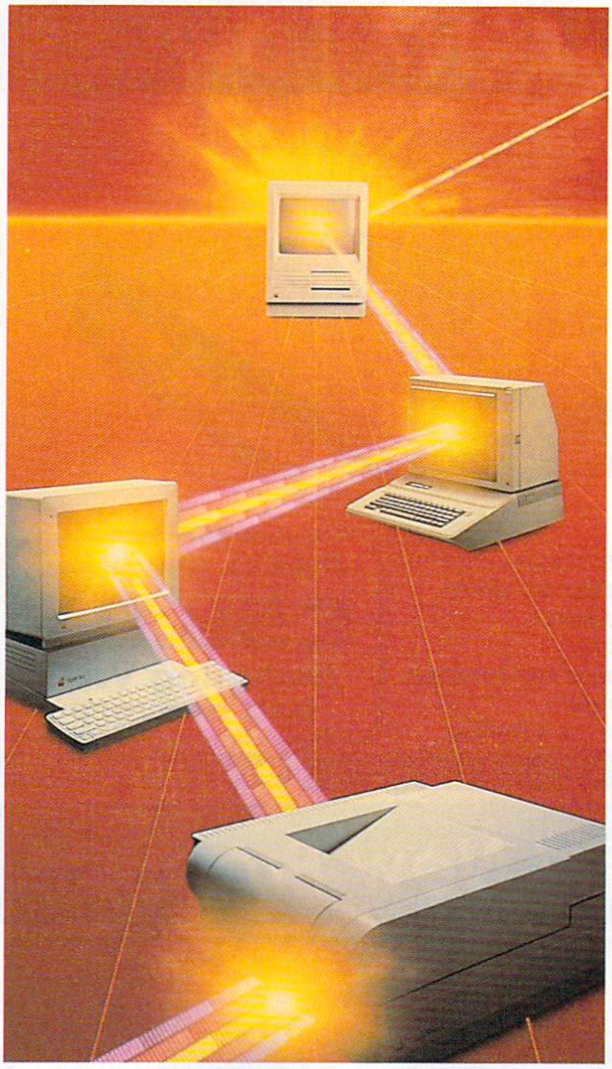
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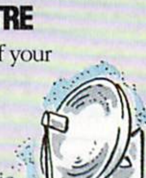
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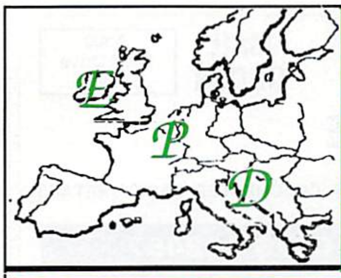
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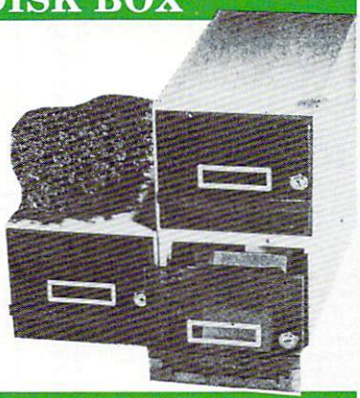
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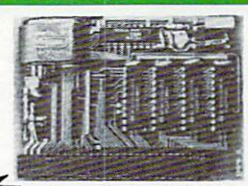
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Ezra



Mac bashing

I USE Apple Macintosh computer at work, together with Mac Draw software, for designing various types of forms and documents.

I have purchased an Amiga 2000 for home use and I would like to continue designing from home. Would you be able to advise me on a suitable program which has similar facilities?

I have tried a number of software retailers who advertise in your magazines for a similar program, and I have been told that none exists. I would be most grateful for your advise and assistance.

M. J. McAuliffe,
London.

Continuing the saga of Amiga versus Mac, and again you're in luck. Mac Draw is quite a simple drawing package, and you should be able to achieve similar results with a program such as Deluxe Paint. If you want to animate your forms you should get DPaintIII, else II will suffice.

For designing forms and documents you might be better off with a good DTP package such as PageSetterII (reviewed in the April issue).

Keep on trackin'

I HAVE just started to program some updates for Sound Tracker V2.5 and would appreciate it if fellow programmers would send source code.

Any version will help to keep compatibility, something V2.5 does not. Any code on packers will help as well. All letters answered and disks returned if address supplied. I will also send a copy when available.

Dion Chapman,
P.O. Box 1198,
Collingwood 3066,
Victoria, Australia.

G'day. You should keep in mind the fact that Sound Tracker is a commercial product and therefore copyright, so if you are using any original code you should obtain permission before distributing it.

Of course, if you are writing a program which just happens to be Sound Tracker-compatible, like MED for example, then that's a different matter.

C again

DO you think you could get a little review of some of the professional and public domain C compilers in this magazine please? I am interested in learning C but don't know where to start. Even though C is supposed to be THE language at the moment I haven't seen an awful lot about it.

Gareth White, Partridge Green, West Sussex

By happy coincidence we had a look at a public domain C compiler in last month's issue. Since then, a new contender for "best free C system" has emerged, called Sozobon Z C. Get a copy from your favourite PD library and check it out. Looks cool.

Professional C systems are overshadowed by Lattice, who seem to produce the compiler that nine out of ten programmers prefer. It costs a lot of money, but you won't need to buy another.

If you are serious about getting started in C, you'll need a good book. Try C – The Complete Reference by H. Schildt. Take a peek at the Code Clinic for more C info.

Expansion snags

LIKE many people using the Amiga 500, I am now wanting to expand my system beyond the usual external drive and half meg upgrades. However the availability of information on upgrades seems to be sadly lacking.

I use my Amiga mainly for text and graphic-oriented projects such as desktop publishing, painting, and animation and soon realised that 1 Mb memory was not sufficient.

So out came the back issues of your mag to evaluate the best direction to spend my pennies, memory expansion, hard drives, fatter Agnus, accelerator boards all jumped out from your glossy pages, so a few phone calls ensued.

Here the problems arise. Most of the suppliers I spoke to did not know what did what and why. They all were keen to sell me their products, but were unable to help with a few of my queries.

1: What help is a fatter Agnus?
2: What help is an accelerator board?
3: If I go for a hard drive with extra ram, will this be compatible with the onboard ram upgrades? Or will I end up with memory pools all over?
4: Is it more sensible to go for "loadsa ram" before a hard drive?

Bearing in mind the applications I dabble with the most, perhaps you could help me spend my pennies in the most sensible direction.

S. M. Doe,
Colchester,
Essex.

Easy. Here are the answers:
1: It will allow to upgrade your computer to support 1Mb of chip ram (instead of the usual 512k) and some new screen modes on a monitor. Chip ram is used by graphic and sound intensive programs, so it gets used up quickly.
2: Believe it or not, an accelerator board will speed up your Amiga. They work by replacing the 68000 CPU with a faster 68020 or 68030 CPU and perhaps a maths co-processor as well. When used with programs which have a lot of thinking to do, such as DTP or ray-tracing packages, the speed increase can be considerable.

3: If you have the standard 512k "trapdoor" memory upgrade, any extra memory supplied with a hard drive will work perfectly. You may have problems if you are using larger expansions, but by running a program such as MergeMem you might be OK. Ask the suppliers.

4: A hard drive makes such an immediate improvement to the Amiga that I would recommend you get one first. If you get an A590, you will be able to put up to 2Mb of ram inside it with no problems.

African power

WHILE I enter yet another competition which I have no chance of winning, I thought I might save myself 20p and a trip to the post-

➤

box and write you a letter to go in the same envelope as the compo.

Firstly, a small point about Checkmate's A1500. The disk drive is repositioned, and room made next to it for another. Does this have to be internal, external or doesn't it matter? Drives made internal are cheaper than external ones, but are advertised as 2000 only.

Next, a word of advice about memory expansions would be appreciated. I want to get an expansion of about 1 to 2Mb. I have seen boards advertised for 1, 1.5, 1.8, and 2Mb. My family however aren't too sure about spending so much at once and want to get a 0.5Mb expansion and enlarge it later. I know this is impossible, but they want to know why, and I don't know the answer. Also are there any boards you recommend?

Going on from that, with all these expansions in the pipeline, I have been told by friends that my PSU (power supply unit) will suffer, and that I should but a new one.

The only point is that I am emigrating to South Africa within a year. Is it true that with different power voltage (or whatever) abroad I will need a different PSU for each country , and if so, where can I get it?

On a different note, how easy will it be for me to get a subscription to your magazine from S.A.? Your mag is much better than anything I can get here or there. If I do subscribe from there will I still get the disk?

Simon Champion,
Haselmere, Surrey.

OK, already. You don't want much, do you? For starters, an internal drive will fit inside the A1500 and you can pick them up real cheap these days.

Secondly, though I am loath to admit it, your family are right, it is sensible to upgrade in stages - you don't want all that power going to your head.

There are a couple of boards around that fit in the trapdoor and are expandable in half meg chunks. One that springs to mind is by Evesham Micros which will take up to 1.5 Mb, but anything over 512k is going to require some internal fiddling which will invalidate your warranty.

Alternatively, why don't you just get an A501 or similar expansion and expand your memory externally at a later date?

An upgraded PSU is always a good move – we covered one a couple of months back that seemed to do the business. As for S.Africa, their power system works off a different set of volts and Hertz so you won't have much joy unless the local talent have come up with something. The bitterest pill is sweetened by the fact that it is possible to get an airmail subscription to your favourite mag.

O no 1 for Amiga

Firstly I would like to compliment you on such a splendid magazine which I look forward to receiving every month despite it being hard sometimes for my newsagent to obtain it. Yet this now seems to be solved.

It is with interest to the Amiga market and your magazine I write this letter asking you to confirm whether a bulletin board called 01 4 Amiga is in fact the Number One Amiga Computing Board.

It was claimed users of this BBS can leave messages for the editorial team of your magazine and all messages left will be answered by yourselves online with the best messages going into the magazine.

This BBS in question also has in the past stated that it is Commodore UK's link between Commodore and the end user, that being the person spending vast sums of money calling this BBS. These users could well be your readers.

I find it hard to believe that *Amiga Computing* and Commodore could associate themselves with such a BBS.

Could you please confirm whether these facts are true or is it a pie-eyed claim made by the sysop.

Name and address supplied

Let me tell you, although the guys at Amiga Computing *like to get around a bit in the comms world there is no "official" BBS for this*

Nice pictures, shame about the rest

I AM yet another one of the rapidly-growing crowd of Amiga users, and like many new users I have a multitude of opinions and un-answered questions spinning around in my head.

After six months with my A500 I have finally got acquainted with the basics of such wonders as the CLI, no thanks to completely unhelpful manuals.

I have found to my frustration that the "Introduction to the Amiga" book supplied with this wonderful computer is full of pretty pictures, but also contained all too many references to other books such as the AmigaDOS reference manual. Many integral parts of intuition, such as project flags, seem to be very scantily covered, if at all.

Commodore obviously assumes, in this case wrongly, that Amiga owners can easily afford a large pile of expensive reference books. The AmigaDOS 1.3 enhanced software manual appears to go to the other extreme and assumes that you are already acquainted with the original version of AmigaDOS.

As for AmigaBASIC, basic is definitely the word. For the few programs I bothered writing on it I got the distinct feeling that my old 8 bit micro would have done better and perhaps even quicker job.

For instance, it completely rejected a simple one line IF statement, forcing me to replace it with an identical WHILE statement, which did work! I am now considering venturing into C programming or perhaps buying the imminent AMOS.

Right, 'nuff said on that matter. The Amiga is an excellent computer when it comes down to it. On to some questions:

What is a macro? I have seen several references to them in your magazine but they remain a compete mystery to me. Similarly what is ARexx?

Is there really any use to the AUX: and PIPE: devices? Do any applications use them? I cannot seem to find a description of the Clipboards device. Could you shed some light on what this is for too? I know that Notepad needs it, but that's about all.

What is new about the new fatter Agnus? Will it make any difference with my existing software, for example DPaintIII, Digipaint3 and PageSetterII.

I think that's enough of an outburst to be getting along with. I have written this on Notepad and then fed it through the thoroughly recommended PageSetterII, so you can see how desperate I am for a good text editor.

Stephen Pascoe,
Lexden, Essex.

The term macro can refer to several things. In a word processor, a macro is a collection of text or a function that can be defined to be available from a single keypress. For example, you may define a macro to print out your entire address at the press of a single function key.

A macro assembler allows entire subroutines of mnemonics to be inserted by a single name.

Arexx is a programming language. Its primary use is to provide a "glue" to hold several multi-tasking programs together. An Arexx program can take data from a text editor and pass it directly to a compiler or assembler.

Both AUX: and PIPE: are potentially useful. Some folk swear by them, others ignore them. Rarely would you need to use them unless attempting some pretty techie stuff from the CLI.

By using AUX: you can open a CLI controlled by an external terminal. For example, you could use an ST as a dumb terminal with its own CLI with access to the Amiga's hard drive.

PIPE: can be used to allow a process to pass information to another process. It acts as a temporary file through which data can flow.

The clipboard device is an idea taken from the Mac that Amiga users rarely make full use of. The idea is that data from a program can be clipped and stored in the clipboard. Once there, it can be pasted or copied back in at a later date.

The feature that is often overlooked is that data can be clipped into completely different programs. Of course, whether its in the right format when you do depends on the program.

Try the QED text editor.

DIY makes a stand

DISK space, desk space, the more you have the faster you use it and the more you want. Expanding either can be costly.

In my quest for more desk space I looked at the adds for monitor stands and was surprised to see the cheapest going was £15 going up to £50. So I considered making one of my own and after a couple of tries came up with the illustrated design.

The measurements given are recommended minimums, change them upwards if needed. Make sure the distance between legs is at least 19in, the legs are long enough to clear your machine and any devices you may want to put on it and the board will be deep enough for all four monitor feet.

Get the wood from your local timber shop and get them to cut it to size if possible. Cut the rear corners to shape at home, then sand all edges and corners smooth.

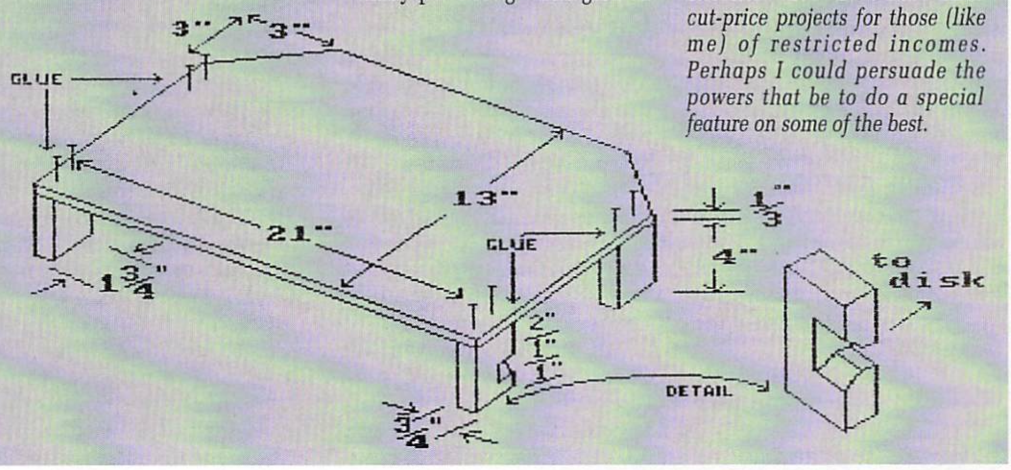
Next rest the board on the legs to check it will be level and wobble free. Make sure you have made the cutout in the front right leg to increase clearance for DF0: and sand all the legs smooth and flat. Finally put strong wood glue on the ends of the legs and nail them in place.

The finished stand takes my Sony Trinitron portable easily, saving a lot of space, and having it raised to eye level and directly behind the keyboard saves neck ache.

Total build time one hour. The total cost £1.84 plus eight nails and some strong wood glue – maybe a little more if you cover it in sticky backed plastic.

M. Marsden.
London.

Excellent idea! Let's have more cut-price projects for those (like me) of restricted incomes. Perhaps I could persuade the powers that be to do a special feature on some of the best.



magazine. Anyone who tells you anything different is just plain lying. If anyone can supply us with hard evidence of this sort of thing even better, I've got this lawyer just hanging around doing nothing.

You are, of course, free to Email any member of staff anywhere you like, but obviously no guarantees of replies can be given – it strains these guys' nerves just to go through all their Email, never mind reply to every message.

As to the other allegation you make, I'd like to see what the sysop of this board has to say. I'll make a promise that if he writes in a signed and dated letter I'll publish it in full.

Amo, amas, AMOS

I recently upgraded from an Atari ST (shock horror) to an Amiga 500. It was the best move I have ever made. Anyway while owning an ST I used STOS as my main programming language and closely followed the articles in your sister magazine with STOS programs on the cover disk.

What I would like to know is, are you going to be running a series of articles on AMOS, including demos on your cover disk like they did for STOS? If so how soon?

Mr N.D.Burton,
Tidworth, Hants.

Yes. Next month. Written by the guy who did a lot of the AMOS demos.

Mutant Ninja DTP

I must congratulate Nic Veitch for his article on How to Desktop Publish. As a graphic designer using Macintosh SE/30s and IIci, I would have killed to have access to such a guide when I first started using the humble Mac Plus several years ago.

Yet I take umbrage with Nic's comments that from just reading a magazine, or looking at a poster and being exposed to advertising, you acquire all there is to know about graphic design.

That's a big claim, like saying because you can read sheet music you can play every type of musical instrument. If we are all so clever, maybe this article is unnecessary.

In retrospect, the comments may have been used to cushion the casual user against the plethora of considerations involved with desktop publishing, but I must admit that even having access to training and possessing the design background, there is still a tendency to use everything the equipment offers in the way of typographical choice.

Where do you draw the line and stop using typographical whims that are incomprehensible and irritate everyone, and not just purists? Judicious selection is very much based on experience and some appreciation of good or bad design.

I am sure that if the quality of Nic's article continues in the next two issues of Amiga Computing, (but without the inflammatory remarks), many desktop publishers will improve the visual quality of their productions dramatically.

Nic states: "like background radiation, we've been exposed to design since birth". Exposure to radiation which is out of control has also been known to have a mutating effect.

Steve Hudson,
Spring Bank West,
Humberside

Like, I'm really sorry you took umbrage, but I sure hope you give

➤

HELP FILE

Who ya going to call?

I am a new Amiga owner, and am confused by what I have heard about viruses. What are they? What harm can they do? How can I tell if I have one, and how do I get rid of them?

S. Birch,
Bognor Regis.

Viruses are programs which copy themselves from disk to disk. If you boot your Amiga with an infected disk, the virus program will load itself into memory.

From then on it will try to copy itself on to any disk which is inserted. Viruses like to save themselves to the first few tracks on a floppy disk. This can destroy any piece of commercial software which uses these tracks for its own purpose.

What's more, some viruses will do something dramatic – like destroying your files – after they have been memory for a while. If you find your computer is not behaving itself very well and tends to crash a lot, you may have a virus.

Here are some anti-virus guidelines:

- *Always switch your computer off completely for 30 seconds in between playing games. Because the virus lives in ram, it can be totally removed from memory by simply switching off. A warm reset (Ctrl and Amiga keys) does NOT achieve this. If you do have a virus on one of your disks, this will prevent it spreading.*
- *Get hold of a copy of VirusX version 4. This program will do a thorough check of every disk you insert. It can be placed in your startup sequence so it is always present.*

VirusX is public domain and can be obtained from every PD Library for a few pounds. If it thinks there is a virus on a disk it will say so. But beware: As mentioned before, sometimes commercial software uses the first two tracks of a disk.

This means the virus detecting software may get confused, and ask permission to re-write the boot sector. Don't let it!

➤

it back. Meanwhile Nic says:

Wash my cotton socks, I'm in the news! I appreciate what you're saying. OK, so good design in the end comes down to what you know and how long you've known it, but in this case I wasn't talking about good design, just design.

Surely you won't contend that you need to graduate from art college before you can lay out a page?

The object of the series is to show people that anyone can do it. I'm not proposing that everyone is an expert straight away, but they're not novices either. In an average day a normal person will read far more words than they will hear. This effects their whole perspective on printed media.

I hope you enjoy the rest of the series. By the way, the analogy with background radiation was carefully chosen...

Kind reset

HELP ! Please, you are my last hope! I am completely baffled. I have an A500 and I have acquired a Fujitsu DX2200 printer for it. The problem is that if I try to print from Kindwords or Home Accounts I have to switch the printer off first, tell the software to print, and then switch the printer on.

If I do not do this AmigaDOS will return "Printer trouble check printer and cabling". The weird thing is that I do not have to do this if I am printing from Basic.

I have asked Commodore and they haven't a clue. Fujitsu say that it's Epson FX80 compatible so I'm using the EpsonX driver (I've tried all the others on the disk anyway). Any ideas?

Secondly, can you tell me why your Workbench 1.3.2 upgrade redefines my @ # " keys. My " has changed places with my @ and # and I've lost my apostrophe (the one below the " on the keyboard) altogether!

Lastly, I am thinking of buying a video digitising package, but I can't afford to buy a video camera to go with it. Would it be possible to connect up my VCR to my Amiga, find the frame I want and simply press pause while the Amiga reads it?

Secondly lastly, thanks for bringing the cover disk back and your magazine is brilliant. (My missus says that a little praise and grovelling should ensure that my letter gets printed. Excuse my sweaty palms).

Richard Frith.
Grovelville.

Sounds like the printer needs a reset code (esc@) which I believe Basic does automatically – in other words it is a software fault and you can only try to see if you can get your problem packages to send a reset before they print (or do it yourself). As for your keyboard problem. Well, how can I break this to you – you've got an American A500. The fault is easily rectified by removing the line "Setmap gb" from the startup sequence.

You'll be lucky to have a VCR that can perfectly freeze a frame well enough for even a fast grabber to have a chance. What about a nice ex-security CCTV camera? They're good enough for the job and only a shade over £100 if you look around.

Paging Mr Cavedaschi

A correspondent in the July issue, Ron Cavedaschi of Brighton, complained about the lack of assistance he received on DTP programs.

Of course, he wanted to see what the programs could produce, as no one in their right minds is going to shell out nearly £100 for something which may not be wanted.

As I can sympathise with Ron Cavedaschi, and have both Pagesetter and PagesetterII, I have run off examples (on a Panasonic KXP1124) that come with both programs and would ask you to forward them to him.

I have used Pagesetter for about 18 months and it is capable of very good results, seen when connected to a 9 pin printer. Your review of PagesetterII and the upgrade price of £39.95 persuaded me to change to that program and it has been money well spent.

PagesetterII only come with two Compugraphic fonts, so I was interested in the disk of Compugraphic fonts available for Professional Page and PagesetterII. Now I am in a similar position to Mr. Cavedaschi as I would like to see what fonts are before parting with well over £100, but I was unable to get any help from the well-known company I approached.

I understand there are 35 fonts on the disk/s but it would be nice to see a leaflet of what they look like.

Your remarks about 9 pin printer output were not very reassuring to the many hundreds of 9 pin printer owners. If one reads reviews of such printers – the StarLC10 for example – the reviewer usually comments on the excellent output of which the printer is capable.

Of course, if are going to compare the output with a deskjet or laser printer then the output will look awful, but everyone have their standards and personal requirements. Ron Cavedaschi states he only has limited funds, so he is unlikely to go out and buy a laser printer. Like most of us, he wants to be able to produce a decent copy with the minimum of outlay.

Finally, my Panasonic printer's default setting has been set to 12 cpi rather than 10 cpi. I did not realise it at first, but this was the reason for part of the right hand side of graphic dumps, printout from PagesetterII from being cut off.

Changing the setting to 10 cpi cured the problem, so full-width pages are now printed. Whether this would effect other printers I do not know, but the information may be useful to someone who has this problem and not realised the cause.

J Farrar,
Hayle, Cornwall.

Umm...er...yes, well it's like this – I've lost it. No, not my sanity, but Mr Cavedaschi's address. Isn't it just typical that the one piece of paper I need is the one that gets eaten by the Technical Editor (at least that's my theory). If you'd like to get in touch Mr C, we'll forward the goods.

Re the CG fonts. Yeah, I dig. I think I know which distributor, or should I say marketing company, you mean. I'll see if we can't sort something out, but they take up a lot of space y'know.

Talking speed

FIRSTLY I would like to make one point I think many magazines have messed up in the past, and that is basically the speed of a modem that normal telephone lines can handle.

Many people get the impression that 1200 is the norm and if you really want speed then 2400 is the one to go for. These are the people who when told of modems that operate at 9600 or 19200, say "Oh well... you'll never get one of them running on BT lines".

My board, which operates at 9600, is on the old analogue exchange and it still works fine and I know also that British Telecom themselves use 19.2s to transfer info from exchange to exchange.

Obviously the expense is another key issue here. 2400 modems ARE a lot cheaper but when you think it will take four times as long to transfer a file your bill will become four times higher, so with the extra money you can buy a faster modem and not sit watching that file download!

The prices range from around £100 for a 1200,£200 for a 2400 £250 for a 2400 with error checking/compression and £850 for a 9600 with error checking & data compression (can achieve speeds of 14.4 in many cases).

If you are considering setting up a bulletin board of your own, then there are various companies offering sysop discounts – which means that you can get a 9600 for £450... all inclusive!

What's the difference between V32 & HST?

There are two different types of 9600 modems. the European standard (V32) and the American one (HST), but before you think you must get the European one, hang on.

There is an important thing to bear in mind – and that's what you want to use the modem for.

If you are a business user then you will find that V32 is the standard, but if you are a simple Amiga user who wishes to call the local boards and get the latest utilities and demos then you need HST. As for the home market the HSTs are the standard – one of the reasons being that you can import them from the US very cheaply.

There are dual standard modems (V32/HST) which are nearly the same price as buying both separately, but these mean you can connect to any board that you will ever possibly want to!

Johnathan Morris,
Cheshunt, Herts.

Professional Draw 2

Structured art is to drawing programs what DTP is to word processors. Ian McDonough paints an exciting picture of professional quality output at a home user price

AMIGA owners fall into two distinct groups. There's the brilliant, mathematically advanced superbrain who machine codes in his sleep and who thinks a heavenly body is a distant asteroid as yet undiscovered, especially by the distorted Hubble telescope...

Then there's the dissolute, arty type of genius who supports Liverpool, loves big bikes, mourns the passing of the ten bob note, and has been given an injection of pure and permanent joy by the graphic wonderment that our Amiga unlooses on an otherwise unsuspecting world.

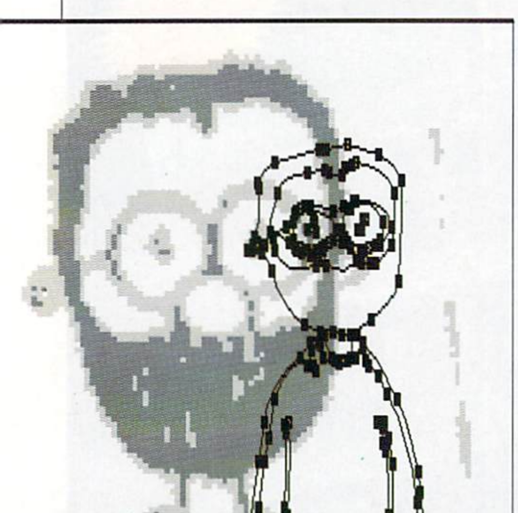
Erm... I'll try that one again, if you don't mind.

Amiga owners fall into *three* distinct groups – the programmer, the artist and the games-player (without whom, there would be nobody writing such superb programs for the Amiga. Yawn.)

Anyway, Gold Disk's Pro Draw is a program which needs some thought and planning, and therefore not really for someone as stupid and inherently instinctive as I am. I do think that it is a very interesting and powerful program, however, in the right hands...

Trying to do things literally "by the book", I restrained my twitching hand from impatiently thrusting the disks into my Amiga and tentatively began to read.

"Requires a minimum of 1 megabyte of memory" Hmmm... like many of us I began with half a meg and then upgraded to 1Mb with an extra disk drive. A *minimum*... ah well, let's see how it goes.



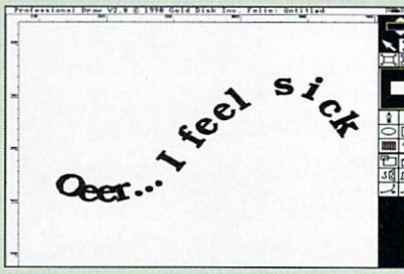
An imported bitmap overlaid with its structured equivalent, courtesy of Trace

All on the line

ONE of the advanced features included in this version of Professional Draw is the ability to align text with a curve. Actually you can align any text with any curve. A requestor will give options as to whether the text should fit inside or outside the curve and the standoff between the two.

This is far more advanced than most professional DTP packages running on any computer. If you think about it, you don't have to attach the text to any curve, the actual curve can be deleted afterwards leaving just the text. This is useful for running around objects/artwork or just for being weird!

Not only is the text fitted near on exactly where you want it, but can be re-scaled to fit the image exactly. This is an invaluable addition as it is hard to judge exactly how long the text is going to have to be to fit around an irregular curve.



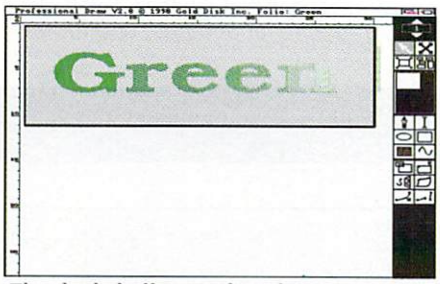
Each individual character can be rotated to be tangential to the curve at its particular position or not. This means that the text can actually "flow" along the curve or just be repositioned in the vertical axis to correspond to the curve – excellent if you have a lot of text which must be clearly legible.

The use of Compugraphic scaleable fonts means no jaggies on the text.

The introduction explains the difference between a *structured graphics program* such as Pro Draw and an ordinary one made up of bitmaps, such as Deluxe Paint.

Bitmap graphics it likens to newspaper photographs, made up of thousands of tiny dots which appear as a continuous tone. Structured graphics organise the image into basic structures based on geometric elements such as lines, curves, ellipses and rectangles. They produce a description of the image rather than the image itself.

Now all this information may seem rather boring. The end result, however is absolutely ex, brill, or mega, depending on which class of computer user you belong to. All these structure-thingies, cure "The Jaggies", which occur when you try to scale up a drawing.



The shaded effect used on the text is quite easy to achieve. First the text is created and grouped together with an outline box, with the effect that the text now appears transparent. It is then a simple matter to put a set of blended boxes behind the text

The manual has a really nifty index of chapters running down the right-hand side of each page, with the current section highlighted in black, just like a hard copy of a pull down menu. It's a bit like the difference between a digital clock and the more traditional face. The information contained in the traditional face contains a graphic representation of the time, portions of time elapsed and portions of time yet to pass. A digital face contains only the time. The Gold Disk index works in the same way.

The next portion of the manual deals with a tutorial, but unfortunately the description of the tools and requestors only arrive later. This can be a little confusing at times: I was desperately searching for the *Fill* item for about 10 minutes.

The *Pen* tool draws a straight line, except when you keep the button depressed, then it draws Bezier

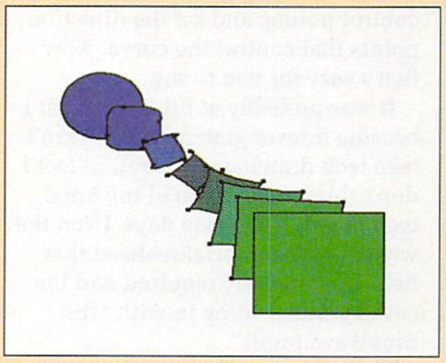
➤

Gold Blend

AS with most structured drawing programs such as sshhh... Adobe Illustrator, you can make a drawing or graphic active so that you can fiddle with it by pointing on it with an arrow Gold Disk have named the *Null Pointer tool.*

Any changes from the familiar pull-down menus, or alterations using the tools, only affect the activated item. In the manual it suggests creating a vertical box, cloning it (yes it does remind you of an ideal theme song for "Boys from Brazil": Send in the clones! an Irish joke.) and using the superb *Fill Colour* and *Blend* requesters to fill the first with blue and the second with cyan (that's a sort of light bluey turquoisey sort of colour for those watching in black and white).

You then select the number of steps you wish the blend to take: The manual suggests eight. After switching off the wireframe made (oops!) it works. Amazing: The box on the right slowly changes colour as it moves



towards the box on the left (or is it the other way around?)

The program will blend the images in the number of steps specified. This is similar to tweening in an animation package: At regular intervals between the two images a new image is placed, some fraction advanced in the process of transforming completely from one image to another. This effects not only colour but also shape – you can slowly transform a square into a circle if you really like.

Trace – the final frontier

BUNDLED along with Professional Draw is a little program called "Trace". Now just because it's little doesn't mean it isn't incredibly useful. In fact it is a piece of coding genius and a godsend to anyone who has a lot of bitmap clip-art lying around.

Trace is a program that will convert bitmaps into structured clip-files as used by Pro Draw. Why bother, you ask, when it is already possible to load the bitmaps themselves?

Well, as I'm sure you're aware, when you re-scale a bitmap you get those jaggies – nasty pixelisation caused by the resolution of the original. Structured art does not suffer from this as a structured drawing contains, if you like, instructions for how the picture is made up, rather than actual binary data for the image itself.

Trace, as the program is imaginatively called, is not limited to line art. Fill and colour options are available to totally capture the image as near to the original as possible. Digitised pictures with lots of shades don't tend to come out very well, but apart from that it works fine.



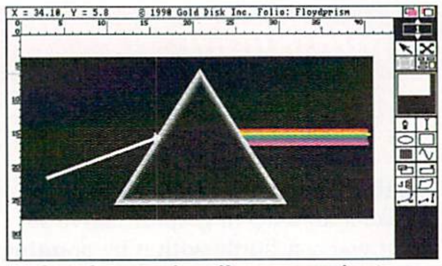
Included on the disks is a small utility called Trace. Its purpose is simply to translate bitmap images into structured clip-art – something it does very well

There is, of course, a snag. You must specify the resolution the program is to work to – how close to the original it should trace in other words. The default setting is plus or minus 1.5 pixels which works quite well for most things, but you may need to experiment in order to get the best results.

curves. To draw a curve, apparently, we must do two things: Drop the control points, and set the direction points that control the curve. Now that's easy for you to say.

It was probably at this point that I became forever grateful that I didn't take tech drawing at school, in fact I don't think that they had invented tech drawing in those days. Even the writers of the tutorial realised that help was urgently required and the cavalry came riding in with "the SineWave.tmplt".

Have you ever attempted one of those church fate type games where you have to thread a copper loop around a devilishly hair-pinned set of wire curves, either inebriated or even completely sober? Child's play compared with this! This was a genuine attempt to do as the manual commanded.



Eight colour mode will give you a basic idea of how your artwork will appear when printed. As you can see, Professional Draw is useful for designing everything from letterheads to album covers

It was of course a reflection on my lack of ability to think, plan and compute, rather than any genuine criticism of the program. But then, salvation! I found the *Freehand Tool*. Instead of all this brainscrunching segments and paths to juggle with, I could, in the words of the manual, draw the curve and Professional Draw would interpolate the control points and tangents that defined it.

Now that's much better, the computer is, once again, doing all the hard work for me and freeing me to be really creative, man.

After a few interesting but difficult tutorials, the manual revealed a major problem in its own design. The next section contained really important information such as the anatomy of the screen, that all the little squiggles on the right are the tool palette, that the white box on the right is the page position gadget and what on earth all

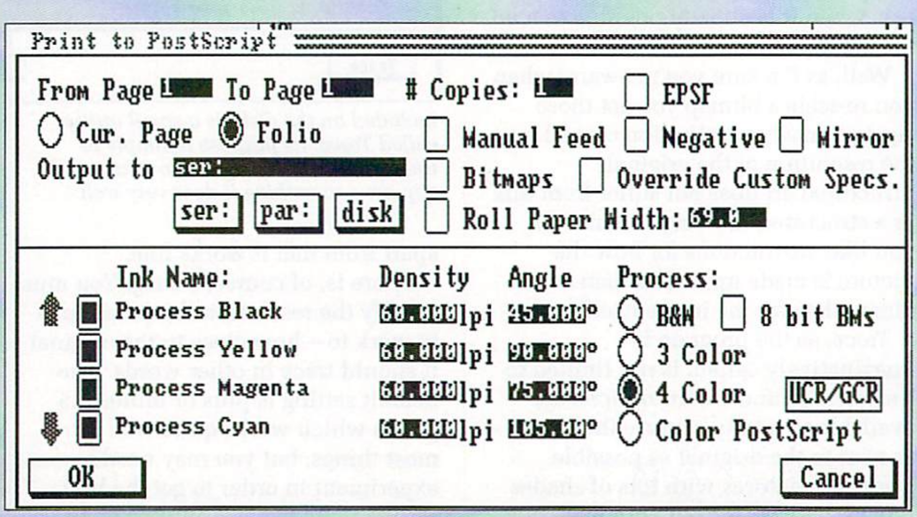
Into print

OF COURSE, all this wonderful structured stuff is a bit academic if you can't print it out. In fact, the nature of Pro Draw is such that you don't actually know what you've got until you print it out – perhaps a preview mode wouldn't go too far amiss.



Rather like Gold Disks DTP packages, Pro Draw can produce high quality, high resolution output on a standard printer. That is to say, it will drive the printer to the limits of it's resolution – something few other packages are capable of. This doesn't mean you're going to get 1000 dpi out of a 9-pin, but the results are quite staggering.

The bestest bit is the postscript output. Now if you have a laser printer, and that's as far as you want to go, that's fair enough – you won't need postscript output. But there are at least two incidences when you might have occasion to use one.



Scenario one: You happen to have a typesetting machine lying around, a Linotype for example. Now you are in business. You can output straight on to film at maximum resolution. Pro Draw will even handle its own colour separations, producing films for three or four colour processing with undercolour removal and all of the sort of stuff that publishers get really excited about.

Scenario two: You want something printed professionally but you don't have a printer up to the job. Simply select the disk output option and all the data, including postscript information, will be spooled to your disk. Now you can send it off to any one of the Amiga bureaux springing up around the country.

those obscure, illegible little icons are really supposed to represent.

This is an excellent section called *Basic Concepts* and to be of any use should have been thoughtfully placed at the beginning of the book.

The most useful tool I noticed from the start were two rulers running along the top and left side of the page. They measure the page in whatever units are specified in the Layout Tools requester and adjust to whatever magnification is being used.

Whenever editing or drawing is being carried out the rulers have a sliding line to indicate the position of the X and Y axes. The assistance afforded to aid accuracy made one wish that Pro Draw had been mandatory for the English team during the term of Italia 90. The rulers helped even me to construct intricate mathematical figures.

The list of features contained on only two small disks is lengthy, and just goes to prove the myth that size isn't everything.

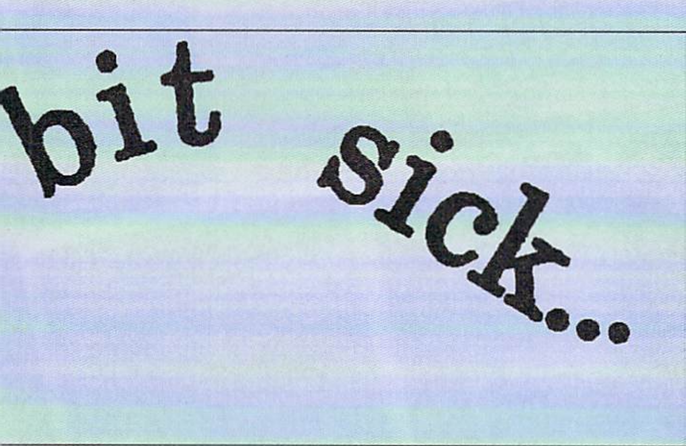
Features such as scaling, rotating, blending, cloning, distorting and wrapping text along a curve are just a few of the advanced tools normally to be found only on more expensive software.

The ability to import bitmapped graphics from other programs such as Deluxe Paint is an exciting feature, and one that I attempted successfully on this occasion. These bitmaps can be traced by hand to create structured drawing versions, and thus a graphic free of jaggies.

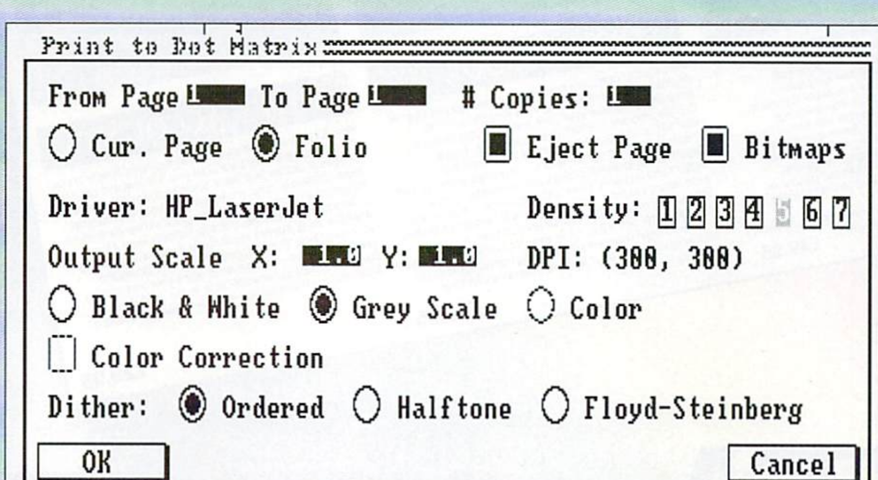
The flexibility of Professional Draw is evident in a number of ways. It can, for instance, be used not only with Professional Page, but with other page layout systems which support EPSF files (Encapsulated Postscript Format, stupid... er... sorry just addressing myself), even on different machines.

Professional Draw is well worth the Ecus. Ecus me, that should be shekels. When compared with other structured drawing programs for different computers, costing a great deal more, this system offers equal, if not greater features and flexibility, and tremendous colour possibilities.

It might take some time to get the hang of, and there are aspects of it that will forever remain a mystery to me, but I feel that the potential ready to be unleashed on these two innocent-looking disks is of ginormous proportions.



Scanned output from a nine-pin dot matrix printer. This was the nastiest printer we could find (it uses the CBM printer-driver, so it must be bad) and yet the results are still pretty stunning – imagine what you could do with a nice laser printer or even better, a typesetting machine



If you can copy the file on to a PC disk you can get even more bureaux to help, since the postscript language is not machine specific.

An update to the original Pro Draw is an option for HP plotter output. Again, you can spool this to disk if you don't happen to have one of these devices, and pop it in the post to someone who does.

REPORT CARD

Professional Draw 2.0
Gold Disk
£199.95

FEATURES ....
Packed full of features previously unavailable on the Amiga. This program is drawing level with Mac systems with its excellent facilities for handling text.

DOCUMENTATION .
Some interesting examples and tutorials, but perhaps they might have been better explained. All features are reasonably documented.

SPEED ....
Compugraphic fonts are never going to be incredibly fast, but there are major improvements on previous versions in other areas. Unfortunately this means you don't have time to nip off for a cup of tea while it does something.

VALUE..............
Better value if you can buy it in the States. Tax and distributors profits over here make it slightly less attractive but it's still well worth it. Ironically you can probably get it cheaper by buying 1.2 and taking advantage of the upgrade offer.

OVERALL 82%

Gold Disk still lead the way in professional, productivity-biased software for the Amiga

Distinctly Digita

Cleverly written and always favourably reviewed in the press, Digita produces a range of powerful, low cost software for the home and business user.



DGCALC

The fastest and most powerful spreadsheet available in this price bracket, with 512 rows by 52 columns, giving you up to 26624 cells. As with all Digita products, the operation of the program is clearly thought out. Being either menu, mouse or command driven you'll be able to start using it within minutes – even if you've never used a spreadsheet before. Some of the features which make it such good value are the exporting of ASCII files for integration with other programs, adjustable column width and text overflow, programmable function keys (macros), and a unique windowing facility, so that you can look at different parts of a sheet at the same time.

£39.95

MAILSHOT

If you ever need to send out mailings or print labels, you know how fiddly and time-consuming it can be making sure all the labels are printed correctly. Well now all that's a thing of the past. Because Mailshot actually shows you the labels on screen, you can type names and addresses in exactly the correct place. But more than that, the labels are animated on screen as a continuous sheet, allowing you to scroll backwards and forwards, to search for particular keywords or to edit entries with the minimum of fuss. Facilities include searching, detection of duplicate labels, sorting (even surname!) 9 labels across, 999 copies of any label. This has to be the simplest and most effective method of creating a mailshot available.

£24.95

FINAL ACCOUNTS

The program will take information prepared by Cashbook Controller and produce a complete set of accounts including:
* Trial Balance * Trading and Profit and Loss Account
* Balance Sheet * Notes to the Accounts
* Full Accounting ratios.

All reports may be produced at any time, with comparative/budget figures if required. The facility to produce these documents quickly, accurately, and regularly is of enormous help in running any business, large or small, since one shows the true profitability achieved, and the other the exact strength of the business in terms of assets and liabilities.

£29.95

E-TYPE

Do you ever have to print names and addresses at awkward places on envelopes, or do you ever need to fill in tricky forms or invoices where the text has to be in exactly the right place? Usually you have to do it by hand, or get your trusty old typewriter out of the cupboard and dust it off. Well not anymore. The Emulated TYPEwriter transforms your computer and printer into a fully fledged typewriter, supporting bold, underline, italic and other type-styles. Because it can display and print text INSTANTLY you can line up your form, press Return and Space a few times to move to the correct place, and then start typing. Alternatively you can switch to line-by-line mode, which offers word-wrap, justification and proportional spacing, so that you can edit each line before it's printed.

£39.95

MAILSHOT PLUS

Advanced version of Mailshot for the business user with the following extra facilities:
* integration with other software (using ASCII files)
* column/tabulated summary (ideal for telephone lists, etc)
* 4 extra memo lines per label (with defaults) * system for coding, dating and adding messages to each label
* different layouts available for horizontal and vertical justification.

£49.95

CLASSIC INVADERS

Escape from executive stress with the classic space invader game.

£14.95

CASHBOOK COMBO

Money saving combination pack featuring both Cashbook Controller and Final Accounts – Save £10.00.

£69.96

PERSONAL TAX PLANNER

Are you absolutely sure your taxman is doing his job correctly? Plan your own tax with ease, this menu-driven program will calculate your income tax liability (4 tax years included) and provide pertinent facts about your tax position. You can perform 'what-if?' calculation to discover ways to minimise your tax liability. In fact, the program will advise you on things such as, if you are a married man, whether it would be advantageous to have your wife's income taxed separately or not. At this price who knows, you will probably find that PTP will pay for itself in tax savings the first time you use it!

** STOP PRESS **

July '89 – PTP user receives tax refund of over £2,000!!

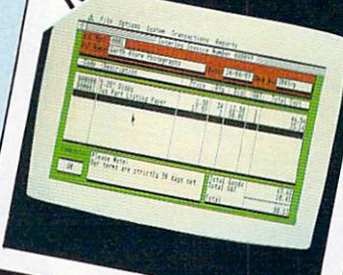
£39.95

DAY-BY-DAY

An excellent way to get organised. With it you'll be reminded of birthdays and other anniversaries, meetings and appointments, phone calls to make and so on. As with all Digita products, inputting information is simplicity itself and, once entered, you can search for keywords or for particular events such as birthdays to see when one is coming up. Includes month/week/day planner, automatic reminders for overdue appointments, month and week summary at a glance. For less than £30 this is the ideal way to make sure you never miss that important occasion again!

£29.95

NEW



SYSTEM 3

Take the first essential step in computerising your business with this simple integrated suite of programs:

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VISTA – a brave new world

When is reality not reality? Who can say what's real and what isn't? John Kennedy explores a universe that only exists in his Amiga

STUDENTS of optics will know what a virtual image is. It's an image which is real and yet and yet at the same time unreal. You can see your virtual reflection in a mirror, but you can't project it on to a screen.

If you've been keeping your eyes open you will probably also have seen the calmour over virtual realities, one of those wonderful phrases to use at parties. Instead of images, virtual realities are entire worlds which only exist in the mind's eye of a computer.

The classic example is that of a very relaxed californian with a set of eye-phones over his head, exploring a universe of geometric shapes and colours. The eye-phones create a three-dimensional image to confuse the brain into thinking it's somewhere else entirely. The illusion can be enhanced with tactile feedback gloves to provide a sense of touch when grasping computer generated objects.

However, this is not a completely honest definition of a virtual reality. Any artificially generated sensual stimulii can be construed to be "virtual".

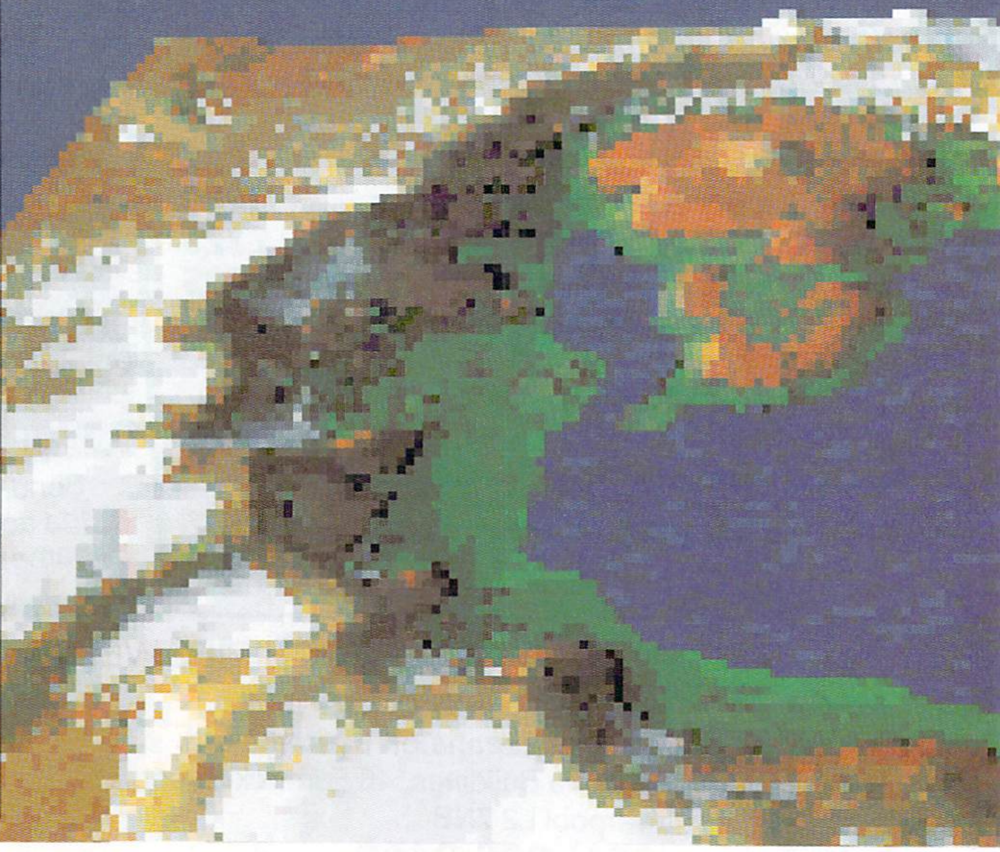
For example, imagine a computer console that can act as a view port on the world. You select any place, anywhere, then zoom in, stand on a plain before a mountain and look around you. You choose your location, the time of day, the seasons – even the weather, to suit your mood.

When you've grown tired with Earth, you visit another planet in the solar system and explore where no one has been. You take a quick day-trip to the giant volcanoes on Mars and take a few snapshots, all from your imaginary terminal.

And when the physical universe has unfolded its secrets for you, you explore the very fabric of mathmatics itself, wandering through the fractal valleys of Mr Mandelbrot.

Of course, all this is impossible. Which is why Vista is such an interesting program. Programs which attempt the impossible are sufficiently rare to make them interesting.

Vista will render real landscapes for you in HAM mode, using information from real-world co-ordinates. The co-ordinates in question come from United States Geologic Survey Digital Elevation Mapping files. These files contain data sampled at



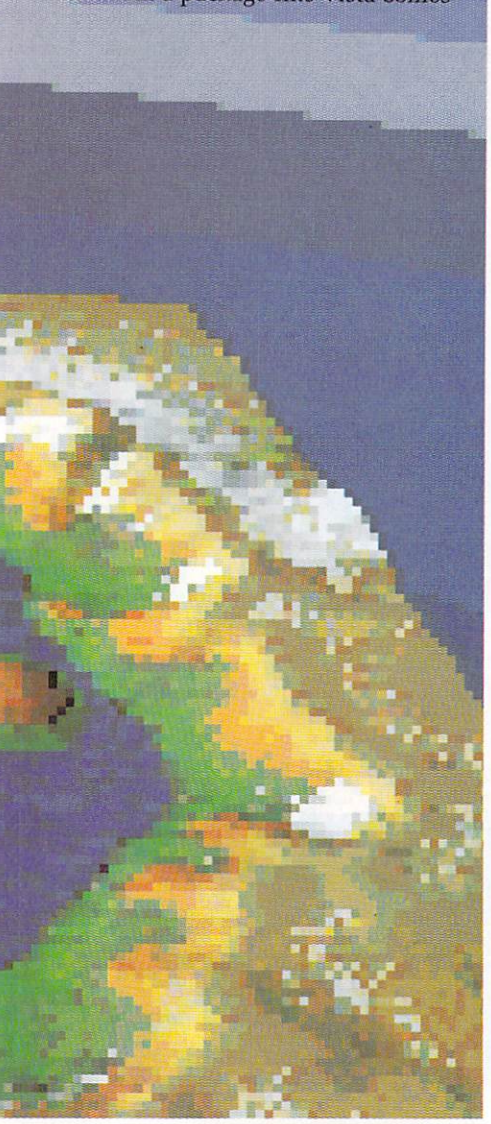
approximately 30 metre intervals which means a typical Vista file is made up from about 130,000 polygons.

This alone would be inpressive, as it allows an accurate representation to be made from geological data. It is even more impressive because of the artificial intelligence engine built in. The AI will decide where trees can grow and snow can fall. It will cause rivers to flow in realistic ways.

Your outlook on this world is controlled from a control panel on the left of the landscape plan view display. From here your location and the site you are looking at may be controlled. The tree and snow parameters can also be adjusted to provide views at different times of the year.

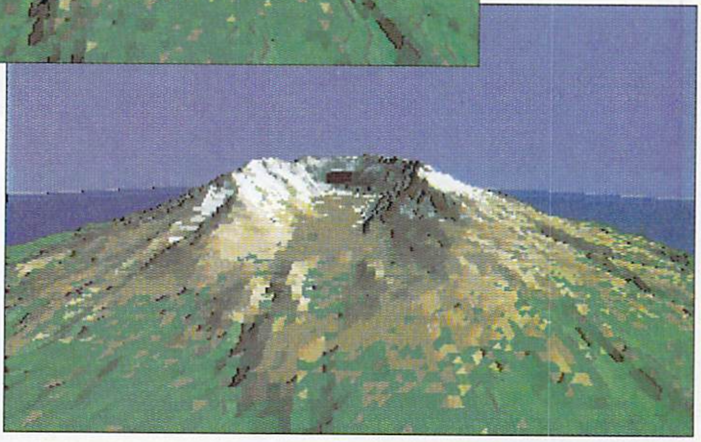
Non-romantics with their feet firmly on the ground and heads in the real world might ask questions like "Do I really need a program like Vista? What do I do with the pictures I create?"

I feel sorry those people. Half the fun with a package like Vista comes

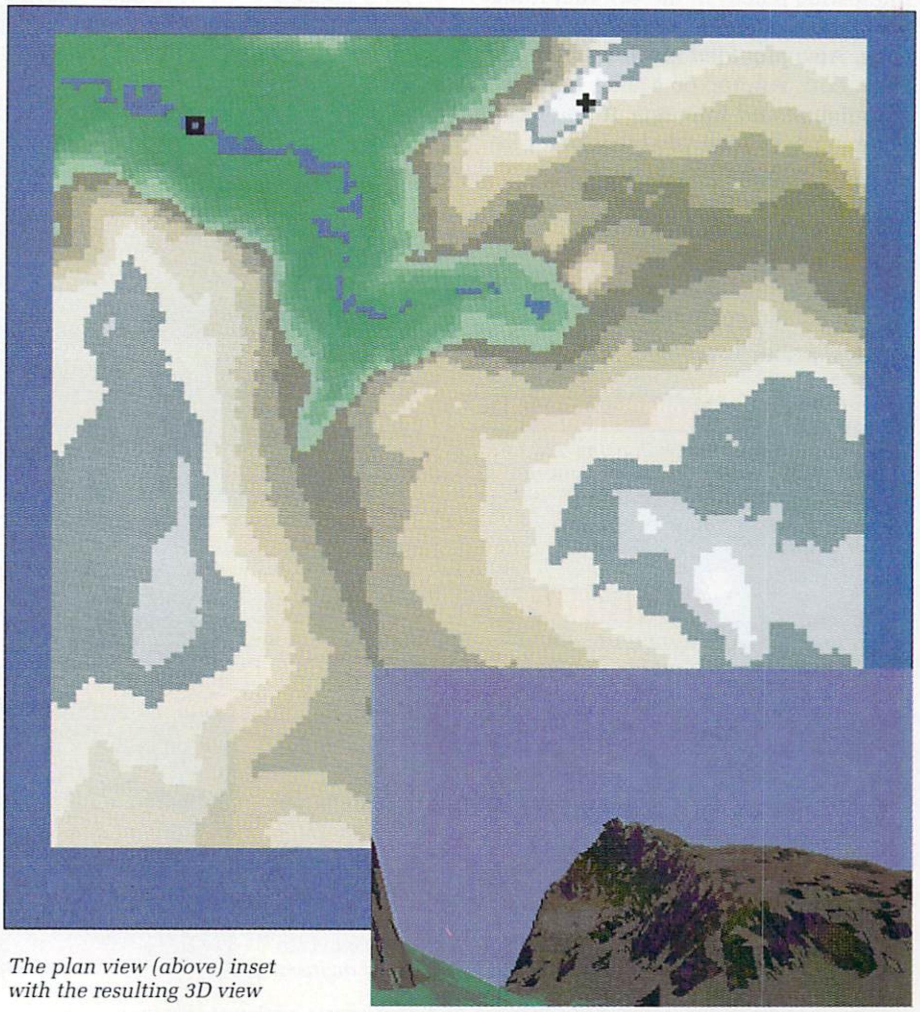




On the 18th May 1980, Mt St Helens blew its top. These Vista generated images are produced from authentic data captured before and after the "big bang"



A huge crater is now all that remains



The plan view (above) inset with the resulting 3D view

from just playing around, tweaking landscapes until they are just right. The production of IFF screen files is almost secondary.

If the IFF files are important to you, you can have more control over them by outputing the data in a format suitable for the Turbo Silver raytracer. All the illustrations generated for this article were render using Vista, which proved more than satisactory. In either case, you can produce a script file which will generate many different views of a landscape, ideal for animations.

For those desparate for something useful to do with the package, Virtual Reality Labs have one or two suggestions. Geography teachers can use it to generate examples for their classes. Hikers can preview their journeys. Engineers can produce line-of-sight surveys. Games designers can use it to make realistic backdrops.

Some of these uses assume that the DEM files exist for the area you wish to study, which may be a problem. Vista comes with files for four interesting places in the US, including Mt St. Helens before and after the big bang. Also provided is Mons Olympus – the giant volcano on Mars – and the Mandlebrot and Julia sets. If these are not enough to keep you busy, you can choose a randomly created fractal landscape to explore.

REPORT CARD

Vista
Virtual Reality Labs/HB Marketing
£59.95

EASE OF USE...
Very easy to use. Although using an external ray-tracing package solves the problem, some more control over effects such as lighting would have been welcome.

SPEED..............
Surprisingly fast. Even at the highest resolution, the rendering is not a "leave it overnight" affair.

VALUE..............
Depends on how you look at it. If you have a definite use in mind, you'll see it as money well spent.

OVERALL 87%

A package that is destined to find a space on the shelf of all those interested in Amiga graphics.



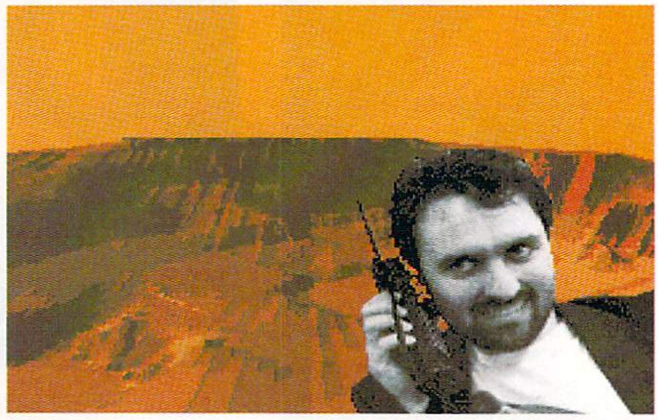
The Amiga Computing *teams holiday snaps...*



...as they visit a US national park...



...explore the Arctic...



...and finally stop off on Mars: All done with a little help from a low-priced video digitiser

Target
This is the spot that the imaginary observer is looking towards

XYZ
The co-ordinate switches can be switched on and off to control movement in one, two or three axis of movement

Camera
This is the location where the observer stands

Lake
Place a lake anywhere you like on the landscape. The computer allows the water to fill the landscape up to the correct level

Snow
The height above which snow appears on the mountain sides

Tree
The "timber line", above which no vegetation grows

Haze
To provide some atmospheric effects, the level of haze can be chosen to lie somewhere between a pea-souper and crystal clarity

Blend
Subtly merges the colours to add to the realism

Colours
The palette may be redesigned to completely alter how the landscape appears. Changing the standard blues and greens can put you on another planet.

Poly
An indication of the resolution of the rendered landscape. With size 8 selected, 2048 polygons are generated. Using size 1 means 131,072 polygons, a longer rendering time and a higher quality image



River
Running water on tap. The river will flow downhill, forming lakes in hollows and waterfalls over cliffs

Light
The location of the sun in the sky and the subsequent changing of shadows can be controlled by chosing one of the four compass points

Smooth
Selecting this option causes the landscape to be rounded slightly, removing any rough edges. It may be repeated to round down any unsightly jaggies

Wide/Zoom
Your imaginary camera has two lenses, to provide different views from the same location

Render
Starts the image generation process

View
Displays any hidden landscape previously rendered

Fractal
Generates a completely random landscape using fractal geometry and some simple shaping rules

Promised as "coming soon" are expansion disks with data for underwater explorations, more extra-terrestrial sites and a few more earth-bound examples. As the files use US data, it's unlikely that Macclesfield will ever be rendered. This will probably not be a great loss to mankind.

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Doubling Up On Success

Last year saw almost 30,000 people converge on the first Computer Shopper Show. This year, the event - already the world's largest pre-Christmas computer shopping spree - will be even bigger.

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The move to Wembley means nearly twice as much floor space, twice as many exhibitors, twice as many bargains, twice as many entrances and an extra day - all designed to cater for record crowds.

• • • • • • •

After all the Computer Shopper Show exists entirely to help the buying public get what they want at the price they want to pay. Ask anyone who went to last year's Show about the money they saved. Many visitors in our exit poll reported getting more than twice what they expected for their money (or paying half what they'd budgeted). That's what we call value!

• • • • • • •

Then there's advice - lots of it - on what to buy. Whether you're already a committed computer buff or a complete novice.

• • • • • • •

Whether you're in to PCs (including Amstrads and any IBM clone), Amiga, Atari ST, Acorn (Archimedes and BBC),

Amiga Arcade

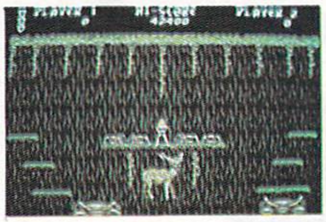
Hercules goes Fem. Lib.

APPARENTLY Hercules had this daughter, right. She got cursed by Hera and in order to lift this terrible blight must complete a very difficult platform game...er, I mean re-enact the historic 12 labours of her father.

Well that's Greek mythology according to Millennium, anyway.

Yolanda (for it is she) must complete more than 50 levels of the fastest and most difficult platform game ever (well, probably).

Features include a three level



trainer for those who don't feel quite up to herculean feats to begin with and an option which allows the tasks to be selected in a random order.

When the original Hercules came out on the C64 it prompted proposals of marriage from the press – how will the 1990 version fare?

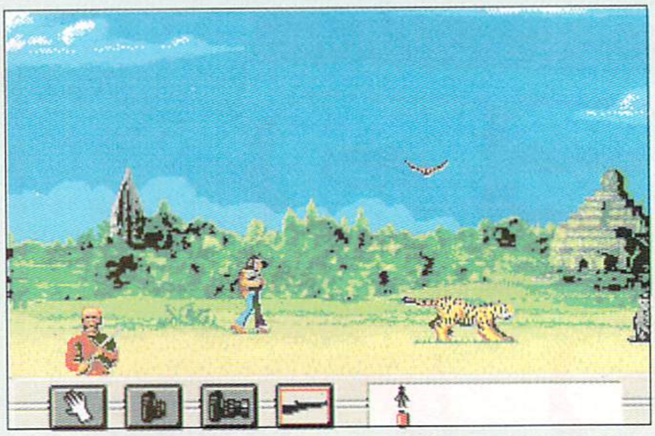
Yolanda is mucking out the stables of your local store at the mythological price of £19.99.

No shoot to kill policy

AN interesting approach to games is being adopted by New Deal. In one of its latest releases, Wildlife, the object is to shoot various endangered species, but with a camera not a gun.

Collect the components of your camera and take a trip through the multi-parallax scrolling countryside admiring the flora and fauna. If you see a hunter, shoot him in the guts.

Also due for release is Astate, an archaeological graphic adventure which has already received rave reviews in France.



Do as I do

ELECTROCOIN, having recovered from the release of Time Soldier is now planning a series of coin-op conversions, releases of which will only be a couple of weeks apart.

The first of these will be Mr Do! Run Run, a conversion of the old classic which achieved cult status around the world back when the staff of *Amiga Computing* used to hang around an arcade on Queen's Parade (a long time ago, in other words).

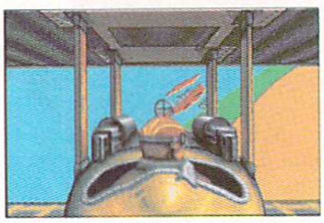
The plot, as was the style back in those good old days, is completely ridiculous. Mr Do must collect fruit and dots while fending off the attacks of ravenous monsters with his trusty crystal ball.

This continuing campaign to re-release old arcade classics is explained by Electrocoin's Luther De Gale as supplying the playability and fun of arcade classics but with improved graphics and features for those too young to remember them.

Oh, and for the misty-eyed and nostalgic of you, the series will be selling at the almost old-style price of £14.99.

Back to the egg...

IMAGEWORKS is about to take off in a new direction with strategy games. Wings is its latest release,



set in the First World War.

Although the game has an overall strategy bias there are many "simulator" type sequences including a 3D fighter sequence and a more conventional 2D bombing run.

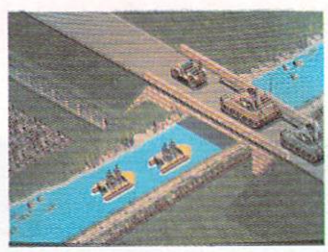
Keep your eyes from the circling sky by watching out for a review soon.

It's got personality

TITUS is launching a new strategy games system. No, sorry, Titus is launching a new strategy game *concept*, called Action Concept.

The system will work around one system disk and several data disks, with more being released at later dates. Nothing completely novel there, you might think.

But the difference is that the data disks will not just be new scenarios to use with the original game, but new games in their own right, with different graphics and



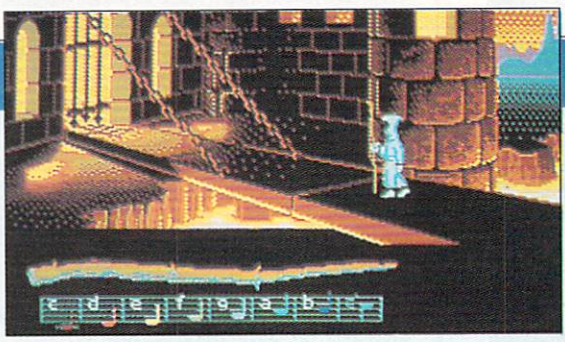
characters, each with their individual personalities (apparently).

The system disk just contains the programming for setting up, among other things, the 3D isometric display which will be a feature of all the games.

The system disk will be released with the first of these action disks, entitled Commando War, with the player in charge of a 12 man squad with the simple mission to capture as much territory as possible.

Future releases will include jungle warfare, Vikings, Trafalgar, First World War, the Conquistadors and a prehistoric battle for survival.

Weaving a good yarn



THE LATEST adventure from the creators of Zak McKraken and Indiana Jones is *Loom*.

In the time of the Great Guilds, all co-existed peacefully and all was well. All that is except for the weavers. They got it into their heads that they deserved better and, unable to come to terms with reality, went off to an island to weave on their own.

Eventually, the weavers gained great knowledge and mastery over the rest of the populace, but isolation had its price. Inbreeding had done nasty things to each successive generation. Something had to be done. The one they call Lady Cygna did it, and what she did begins your adventure.

Not giving much away there, are they? Still, the package comes with a full 30 minutes of drama on tape and a book of patterns, an evening's entertainment for all the family there, surely.

U.S.Gold is responsible for spinning this tale, and it's threading it's way to the shops now.

All the latest news on the games software scene

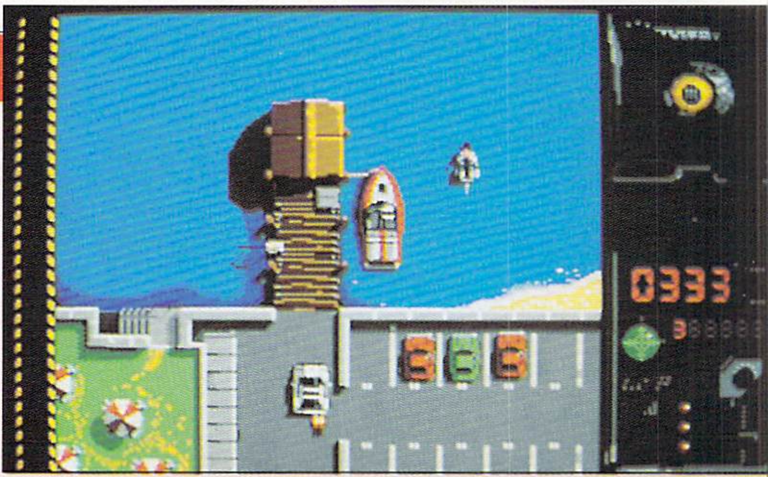


Moore to come

CONTINUING the releases of official James Bond software, Domark will shortly unveil The Spy Who Loved Me. Yes, Bond is back, and getting younger every time.

Following the plot of the original film, Bond must stop the evil Stromberg who plans to launch nuclear warheads at New York and Moscow for some reason more adequately explained in the film.

This necessitates liasing closely with the rather comely Russian agent Anya Amasova as you indulge in over the top car chases (yes, this is the one with the Lotus in it) gun battles and wrestling bouts.



Interestingly,the 007 game series has been getting increasingly better as the programmers delve deeper into the past. Whether this is a reflection on the films or on the programmers remains to be seen, but for the moment, nobody does it better.

Jolly hockey sticks

THE man with the nose has been poking it in where it's not wanted, noticeably around highly crucial street hockey games. Yes, after Wipeout, Gonzo games is planning another release so addictive it should be illegal.

This time street hockey gets the big nose treatment. Start off in downtown Manhattan, dodging the traffic and garbage and beat the local teams in order to build up cred and get to your ultimate goal – Central Park.

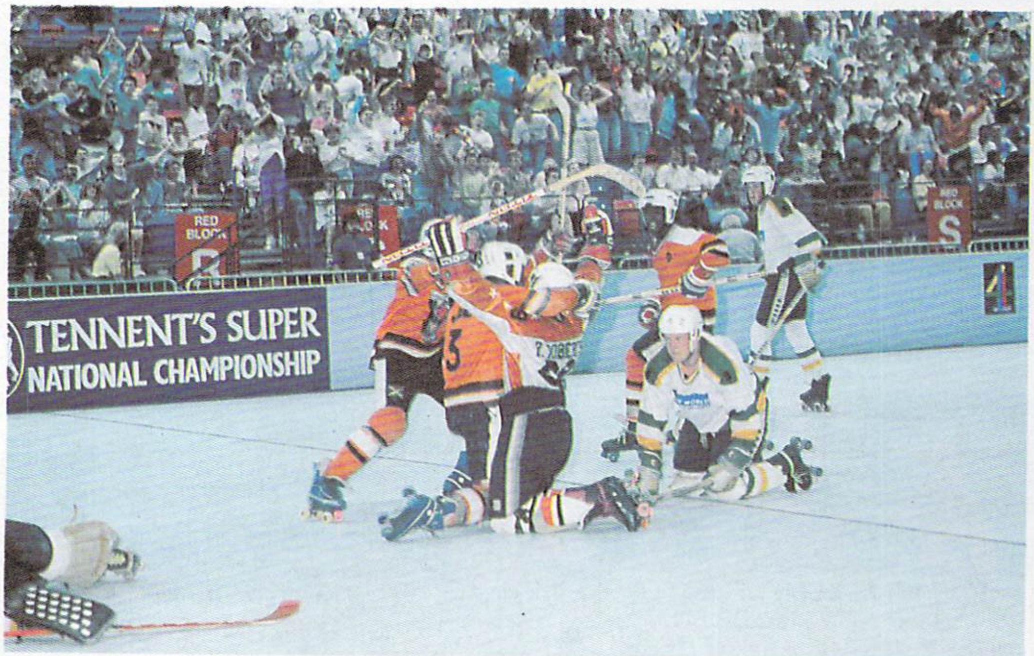
Switch control between your five players, keeping a constant eye on each via the small but perfectly formed remote viewing monitors. Features include animated blocking, tackling, shooting, dribbling and ducking moves.

But hockey isn't all. In between matches you must pick your way through traffic in the busy streets. The street layout is an accurate (apparently) depiction of the Big Apple, so if you ever go on a visit, you won't get lost. There's value for you.

To top it all you can serial link two machines (whatever their ilk) and beat the hell out of a friend, all approved by the British Street Hockey Association.

Street hockey hits (and I do mean hits) your local dealer on August 31.

BRITISH BSHA STREET HOCKEY ASSOCIATION



TITUS has secured the rights to market Disney software in Europe. Disney software will be covering three main categories:

Entertainment, with releases like Dick Tracy, linked to the film starring Warren Beatty and Madonna and Arachnophobia, a new Spielberg production

Children's software, with products featuring the age-old favourite Disney characters like Goofy, Donald Duck, Mickey Mouse etc.

Creativity, starting with a very important release of the Disney Animation Studio, an animation package which seems to have some amazing features.

ACTIVISION has just released the first Mission Disk for the acclaimed Fighter Bomber game. This will provide a further 16 missions, including attacking a well-defended submarine and halting the enemy advance on a beleaguered airport.

When you've had enough you can always design your own missions! If you have the urgent desire to blow apart some airfield somewhere (we all have that feeling now and again) it is but the work of a moment to construct such a scenario.

The Fighter Bomber Advanced Mission Disk is out now, get it before it gets you!

ESCAPE FROM THE PLANET

Attack of the

OH DEAR. The evil Reptilons and their countless hordes of robot monsters are holding humans hostage. But this is not the limit of their tyrannical ambition. The captives are being used as slave labour to further add to the mechanical army of the Reptilons.

Soon these fiends will attack and destroy all life on Earth, and when they've finished with David Attenborough they'll start on the rest of us.

The citizens of Earth know full well they are being watched by eager, greedy eyes. To ensure their salvation they must destroy the synthetic Planet X, the base the Reptilons are using as a monster factory.

Ha-ha, says mankind - that's easy. We'll send not 100 ships, not 1,000 ships, but one ship. One hero alone will be enough to secure our future.

The reasoning behind this is simple - critically flawed, but simple. Earth was going through another of those nostalgia phases where all those naff sci-fi films became cult viewing again and everyone reckoned they were all "fabby" and "corker". So they reckoned a single lone hero would do the job quite nicely.

Play takes place in one of three areas. The canal maze is just that. The hero is in control of a craft which he must pilot along the canals before the time limit runs out.

The tricky bit is that some canals are just dead ends. Learn the routes in each of these sections – they are always the same.

The scrolling is nice - 45 degree Zaxxon style – but once you have learnt the route there is nothing much to this bit. It looks like an afterthought.

If the canal stage is completed within the time limit , which is quite tight, there is the option of choosing one of three ways to progress through the planet. There is no easy route, but different ones may suit different gamers, depending on their style of play.

And so on to the factory stage, which is where the action really starts. Swarms of synthetic swine compete in an orgy of mechanical mayhem to bounce on your bonce. In other words, they're all out to get you.

It's not just the robots either. There are booby-traps everywhere. Electrified floors, revolving doors, movey iny-outy spikey things and small black round things which I haven't quite identified yet.

The robots themselves are fairly unpleasant. Some are content to just trundle about and take pot shots, others feel it their duty to make the affair very personal and encroach on the hero's "space" – these dudes are serious.

Some might actually be quite cute if they weren't stuck on deadly intent. There is even one model which looks rather familiar in a forbidden planet sort of way. Will 60 gallons be sufficient sir?

Collect jewels to enhance your firepower, food to increase your health and bombs just in case. Blow up boxes and machinery for bonus points.

The 3D isometric levels are excellently detailed, but there is a distinct lack of scrolling - no bonus points awarded. Animation effects are not only excellent but extremely funny too.

A lot of care has obviously gone in to the design and execution of the graphics as a whole – it all looks and "feels" right. The lovely machines, the excellent glass cases that cover some hostages – everything not only looks right, but looks right *in the same* way as all the mad scientists' equipment did in the classics like Forbidden Planet and Plan 9 from outer space.

The evil Reptilon stage is a different receptacle of aquatic creatures. Big lumbering monsters attempt to crush the life out of our hapless hero - hope you remembered to collect all those bombs, that's the one regret you'll never forget.

On later levels a new monster will emerge from the ashes of the old and it's time to do battle again.

The game may appear easy to play at first, and the generous number of credits may aid progression to the later stages, but if the underlying strategy is simply to get to the next level then there is a point at which the hero is underequipped for the job - a methodical approach pays hugh dividends.

As good a simulator we are ever likely to see to train would-be heroes for the possiblity of an alien invasion. It's not just a game, it's a safeguard for our very existence.

Colin Turner

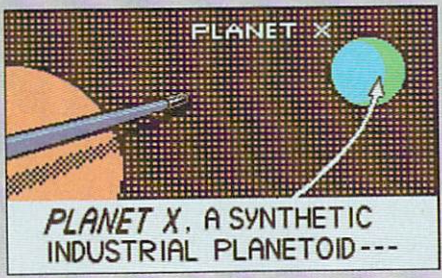
Escape from the Planet of the Robot Monsters
£24.99
SSI

Sound	
Graphics	
Gameplay	
Value	

Overall – 82%









OF THE ROBOT MONSTERS

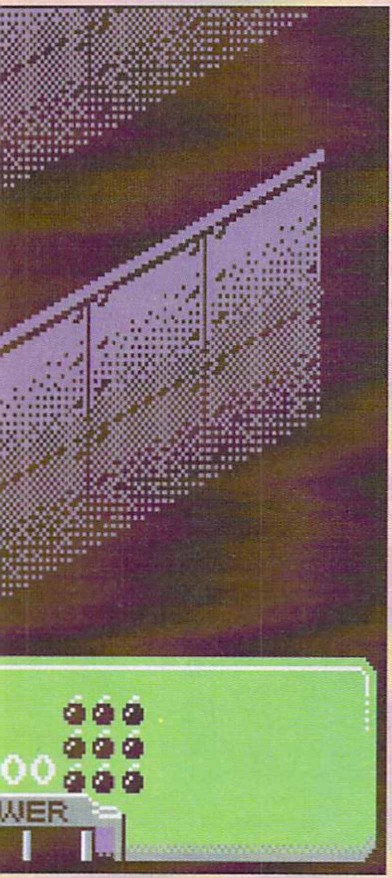
50ft titles

Excellence



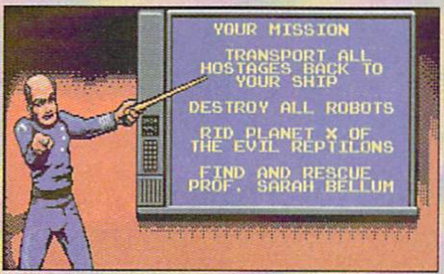


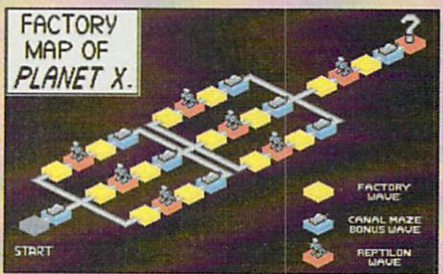
Female (and male) liberation on the Planet of the Robot Monsters. Free the slaves from the shower cabinets before the hot water runs out (and save the universe while you're at it)











KICK OFF 2

Bobby Robson's revenge

GOAAAALLLL! The tradition cry of foreign football commentators, and players of Kick Off, the fastest and best football game ever.

After experimenting with Extra Time, and playing around with Player Manager, Dino Dinner (sorry Dini), has perfected his art with Kick Off 2. Or has he? To be honest, no.

Now before you rush for the poison quills listen up, and hear the tale of how a brilliant program has become more complex, more difficult, more challenging, but not necessarily any better.

Kick Off 2 represents the cumulation of the developments seen in those other programs I've already mentioned. Thanks to this, it plays more like Player Manager than Kick Off, but without the management bits, naturally.

An interesting gimmick is the ability of three or four players to play against each other at the same time, with the aid of a joystick adapter. While creating frantic fun, the experience doesn't really bear repeating as everyone plays in position, resulting in all fruitlessly chasing the ball.

Casting that ability aside, the Kick Off 2 player can indulge in a simple one-off game, a one-off game between two of eight international teams, an eight man international league, and eight man international knockout cup, or a special event (more of later).



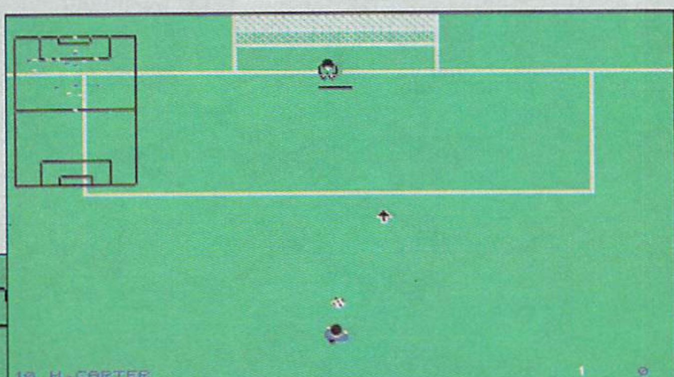
Every aspect of the game down to the actual pitch can be changed from here

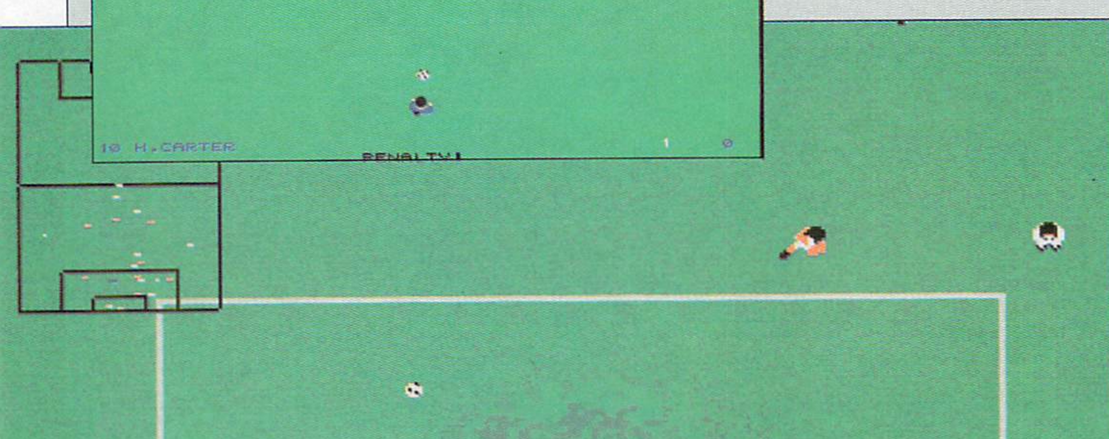
On an options menu the player can decide to set the time limit (three mins per half minimum), the pitch type (normal, wet, plastic and soggy, each with its own pitch graphics), skill level of each team, tactics for each team, extra time in the cup competition, after touch or not (yes if you want to score against the good computer teams), league skill level, game speed, and choice of referee.

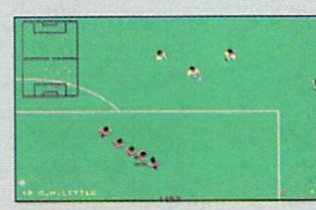
Quite a line up, and there are more options on other menus, including a nice one that allows you to change the strip design of a team, along with its colours.

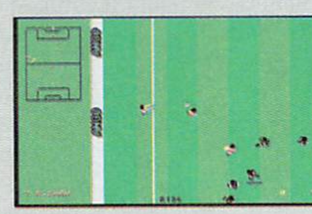
On the simple one-off games, you can load your own tactics from Player Manager, as well as your own PM teams. While this means that your fave team can take on your mates using your own tactics, it unfortunately stops there.

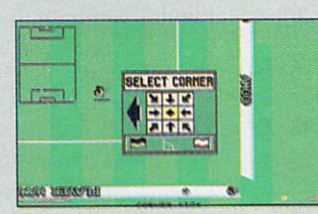
While I can understand the limitation of not allowing your Player Manager team to take part in the league, cup or special event, it seems pretty stupid that the tactics

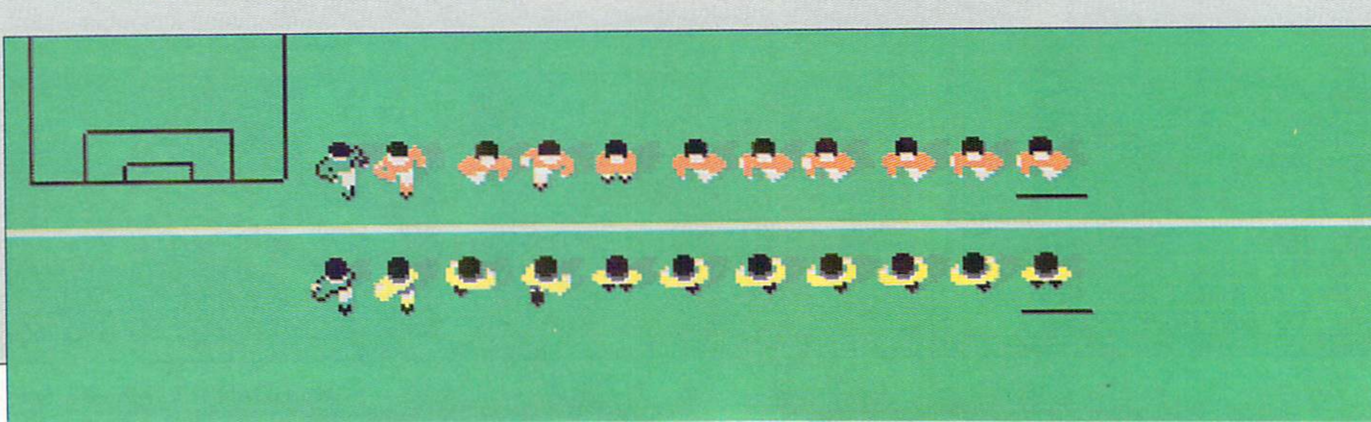
















Perhaps if you dress England in the Cameroon strip they might play some football

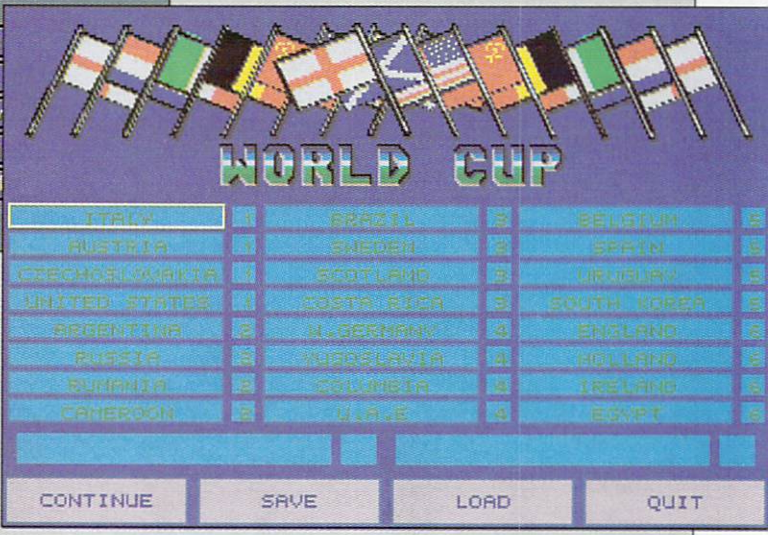
can't be used. In fact, although you are offered a number of tactics from the options menu, you can only use the standard four in the league, cup and special events. Disappointing isn't the word for it.

Actually, on the pitch the Player Manager gameplay has been tightened up so that you are unlikely to hit the ball over from six yards.

Unfortunately the goalkeepers are now far too good. There are just two ways of being fairly sure of scoring, but getting into position to do either is very difficult. This results in in goalkeeping errors deciding many games, and 0-0 draws proliferating when playing the computer.

Now this goes against the grain of what the original program was all about. The fact that that the player can't dribble properly, made the speed of play and scoring of goals the greatest attributes of Kick Off. The speed of Kick Off 2 is less, no longer blindingly fast, merely quick, and goals are hard to come by. Sure, it's far more of a challenge and there is great variety, but I feel something has been lost.

Meanwhile, the other changes on the pitch include variable strength corners, controllable goal-



kicks and thrown ins, the ability to change formation whenever the ball goes out of play, and Brazilian style taking of free kicks in front of goal. There's also an action replay to review any goals you do manage to score, and save them to disk to prove it later.

The special event menu allows new competitions to be loaded from expansion disk, but gives you the World Cup to be going on with. All the right teams in all the right groups are on offer, and you can change them around if you wish.

Having played all of these teams it strikes me that Dino doesn't have much clue about the strength of international football squads. The Italians are far too weak, and the Rumanians and Austrians particularly are too strong.

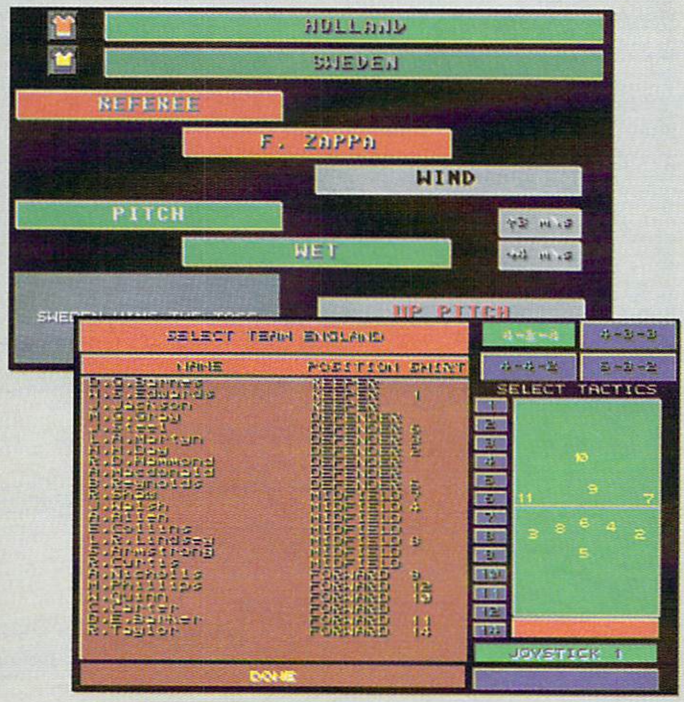
At least there is some balance and challenge for all skill levels in this competition. Getting Cameroon or the United Arab Emirates through the first round is an achievement, while players of Brazil should get at least to the quarter finals.

Another bug with this section of the game is that it rarely allows you to alter formation from 4-2-4, which is incredibly annoying.

So there you are, there's a lot packed into Kick Off 2, and with the prospect of up to 25 expansion disks from Anco, you could be playing it for years. However, scoring is hard, far too hard for any but experts, and there are still some aspects of the gameplay that I'd like to see changed. Kick Off 3 remains a possibility.

Until then I say go out and buy your Kick Off 2, it is a very good game for all my minor niggles. Better than the original? I say no, but then I have completely mastered that, so Kick Off 2 provides a much-needed challenge and,of course, a chance for England to be world champions.

Duncan Evans



Kick Off 2
£19.95
Anco

Sound
Graphics
Gameplay
Value

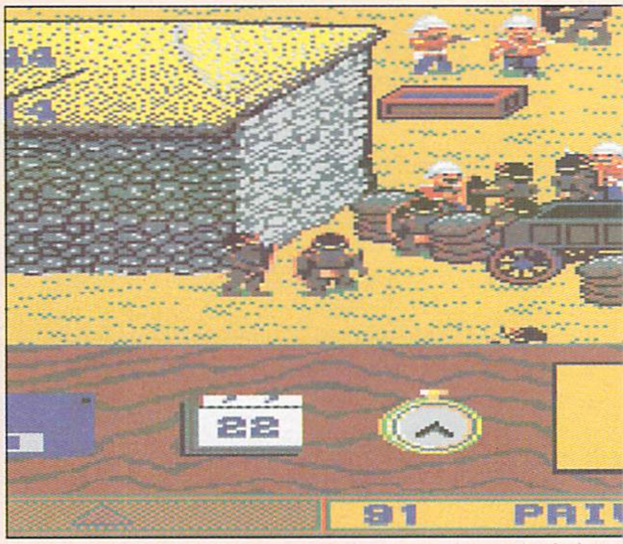
Overall – 81%

RORKE'S

Strategy with a



Place your men carefully – every one counts



Man the barricades! If the Zulus get inside the compound you're finished



Each man can be individually ordered to perform one of nine actions

THERE is a lot to be said for being in the right (or wrong) place at the right (or wrong) time. It comes down to luck, which is a funny twisty turny thing. It can make you miss your bus, win at Spot the Ball or guarantee you a place in history as commanding officer of a hopelessly outnumbered garrison in the Zulu Wars.

The defence of Rorke's Drift is so famous that Michael Caine was in a film about it. However a little bit of scene setting wouldn't be amiss.

During the Zulu Wars a bunch of guys got left behind to guard a supplies depot while another bunch of guys went on ahead to kill all the Zulus. Unfortunately the second bunch of guys got wiped out, which was, like, a major setback to their overall strategy. Now the remaining Zulus advanced on the supply depot (obviously because they had heard how good army biscuits were) and the first bunch of guys were in the custard.

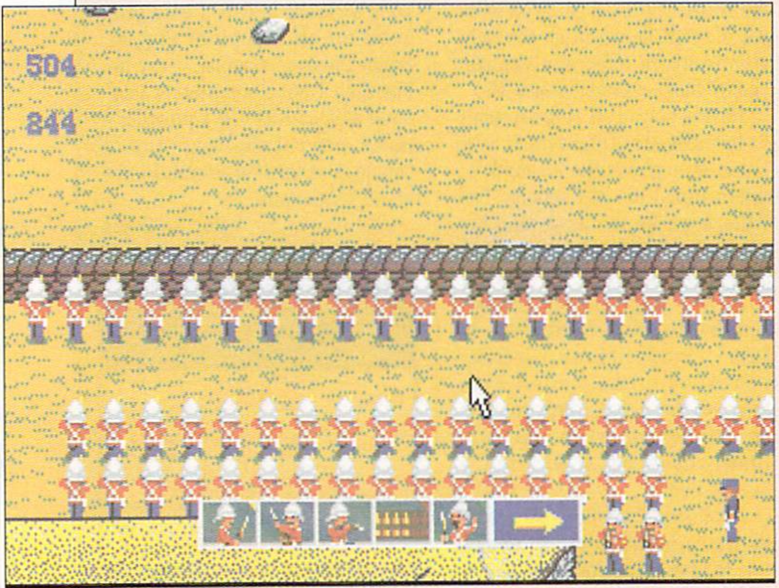
With only 136 men, some of them too ill to move never mind hold a gun or bayonet a fuzzie-wuzzie, the prospect of holding the camp against at least a couple of thousand warriors seemed more than a little remote. But they did, no doubt due to skill, strategy and heroism. But again, perhaps a little bit of luck was involved.

In this simulation you take control of the garrison just one hour before the first attack. The biscuit boxes and mealie bags have all been placed in position as they were on the day, all that remains for you to do is wait and place your men.

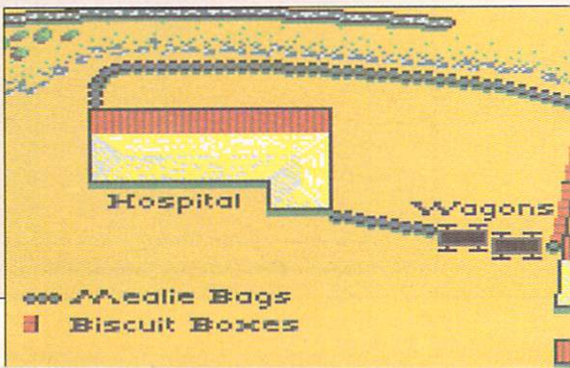
There are a whole range of actions each man can perform – different firing positions, moving at different rates, different attacks. All are chosen for each man from an animated menu – you don't really need to look up the manual incessantly to find out what's going on.

Each individual man has his own characteristics which will effect how accurately he can shoot and his chances in hand to hand with the native hordes.

Each man must be given his orders

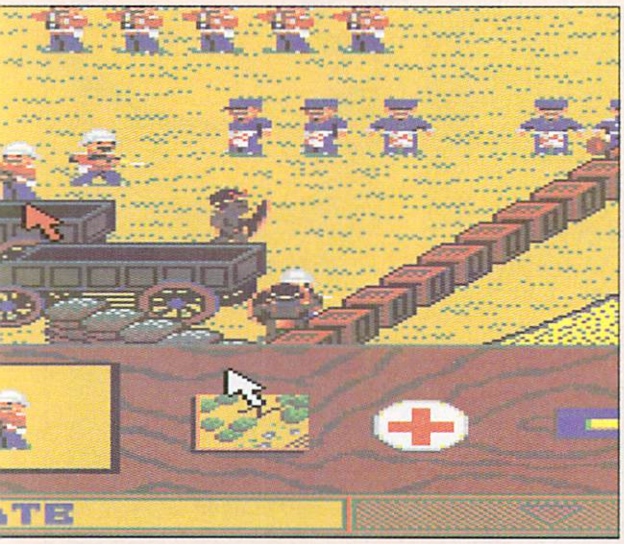


Some of them standing, some are waiting in line... where will the first attack come?



DRIFT

cast of thousands





Wave upon wave of demented avengers hurl themselves at your meagre defences



I'll meet you on the barricades

separately, although a repeat function will allow you to move large groups easily. This individual attention makes it a bit more personal, which is a good thing in my opinion – war is personal, at least to the ones who are face to face with long pointy things.

It can take a long time to finish a game, so there is an accelerator option to speed the action a bit. Unfortunately you can't see the battlefield in this mode, only the number of wounded and dead on both sides.

It is wise not to over use this option as the first you will know of a new Zulu offensive is when the casualty figures start going up – at a time when you have already lost the advantage of your ranged weapons.

It is a little difficult to develop elegant strategy in such a small space, but there is skill in reacting to situations at the right time and to make efficient use of your meagre forces. It is possible to win – you're never going to kill all the Zulu ,but you can hold out for long enough to make them understand what a Pyrrhic victory is.

Presentation of the game is very good and makes it easy to get into, yet at the same time it is a detailed strategic simulation which really brings home the feel and philosophy of table-top gaming.

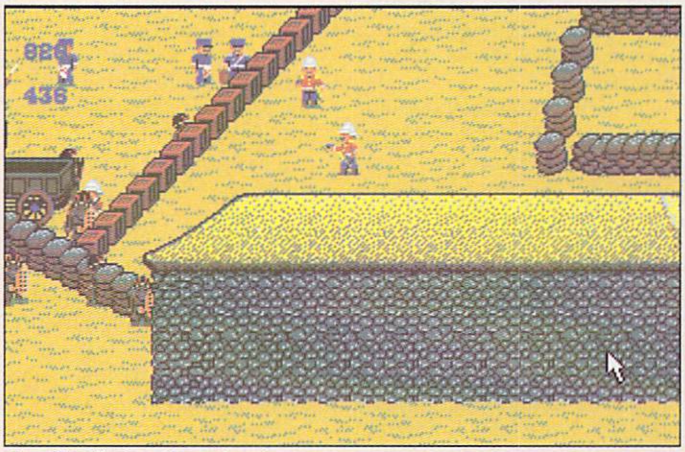
Now it's your turn. Can you defend the garrison? Well, I doubt it, but perhaps you may have a bit of luck, too. As for me, if it wasn't for bad luck, I wouldn't have any luck at all.

Lucinda Orr

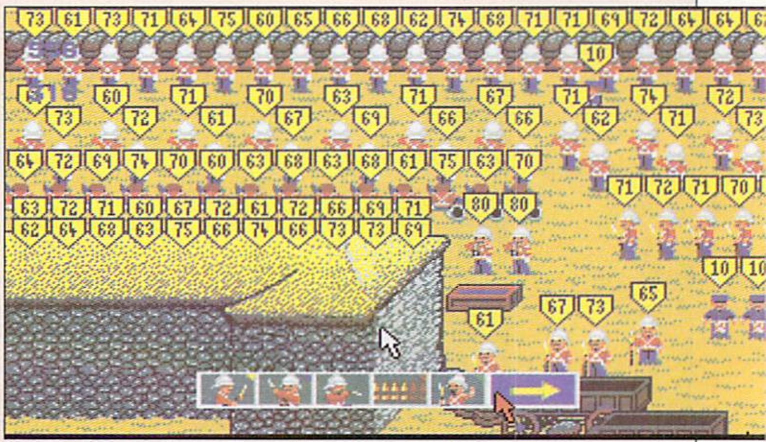
Rorke's Drift
£19.99
Impressions

Aura
Strategy
Gameplay
Value

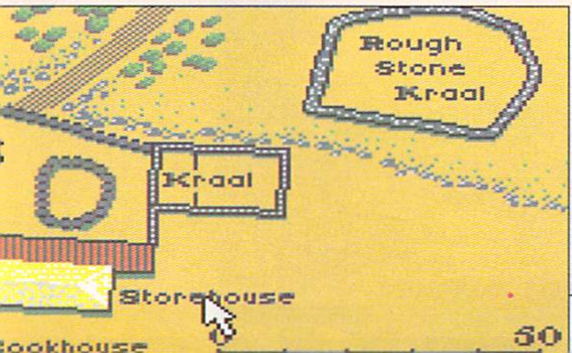
Overall – 80%



Even the officers get in on the act



Fighting ability, health and ammunition can be examined at any time



RESOLUTION 101

Crime's the disease – you're the antibiotic

Excellence

YOU'RE slime, punk. And you've got nothing to lose. Which is why in the near future criminals like you will have a simple choice – rot in jail or do a spot of bounty hunting.

The decision might seem cut and dried, more so when you discover that if you succeed in your mission you'll be granted your freedom. The only drawback is that no one has yet succeeded.

But everyone likes a challenge, and what's more the food isn't very nice, so you trade your warm, comfy although admittedly extremely overcrowded, cell for a Search/Destroy licence and ground skimmer with a light machine gun. Sounds fair to me.

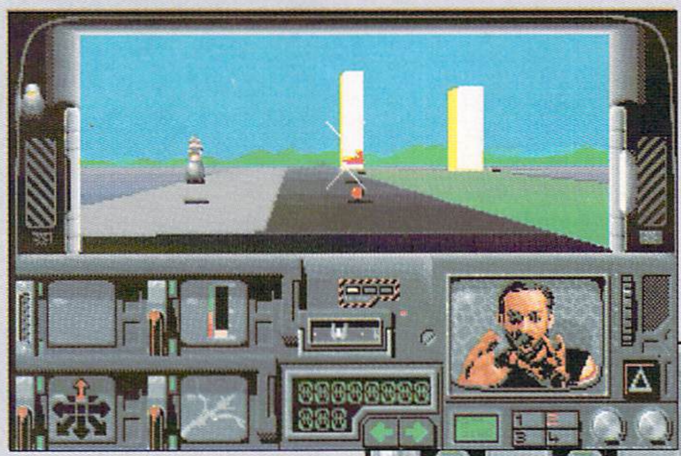
As in all the best plots, your mission is to clean up the city. How you are expected to single-handedly clean up an entire city without so much as a mop is never actually explained, and so instead you spend your time trying to bring other lawbreakers to justice.

Four drug-running scoundrels have carved the area into quarters, and to gain your freedom you'll have to collect evidence and track them down.

In the true tradition of computer gaming, collecting evidence is just another way of saying "shoot everything". Each drug baron has a large gang of cronies intent on making your life miserable. Fortunately, for each one you (ahem) apprehend, you'll earn some cash or some more evidence.

The cash comes in useful for buying bigger and nastier weapons, louder in-skimmer stereos with Dolby "c" and lots of other fun ways of enhancing of your lowly ground skimmer.

Of course, all this would be extremely so-so if the presentation wasn't first class. And thankfully it is.



The graphics are totally solid and are incredibly fast. As you whizz the mouse across the mat to change direction, the landscape hurtles by your nose. Add the customary copper graduation of colours as they fade into the distance and the overall effect is a one of great – and yet controllable – speed.

Your skimmer is fitted out with a CBTV link which has nothing to do with new multimedia devices from Commodore. Instead it shows you what your drug-running friend is thinking.

If he's grimacing and waving his fists about, he's obviously thinking bad thoughts about you and/or has missed Neighbours. If he is smiling and waving he's thinking what a nice chap you are for messing up so badly and making his life a whole lot simpler.

I can say for certain that a tune plays throughout the game, for unlike other publications, we only review the finished product here at *Amiga Computing*. With such a constant repetitive little ditty hammering away, you might think it would quickly get on your nerves very quickly.



Stock up on goodies at the local "Odds 'n' Ends" shop

I'm happy to say that even after long hours of research I still managed to forgo the usual disconnection of the sound leads. I'm not sure about Green though, because he would moan softly and stare at the ceiling every time I started playing.

Gameplay is the way it should be – challenging without being impossible. Extra levels get harder not only by supplying extra baddies to annihilate but also by subtle changes to the city. Large rivers for example. Glub, glub, glub.

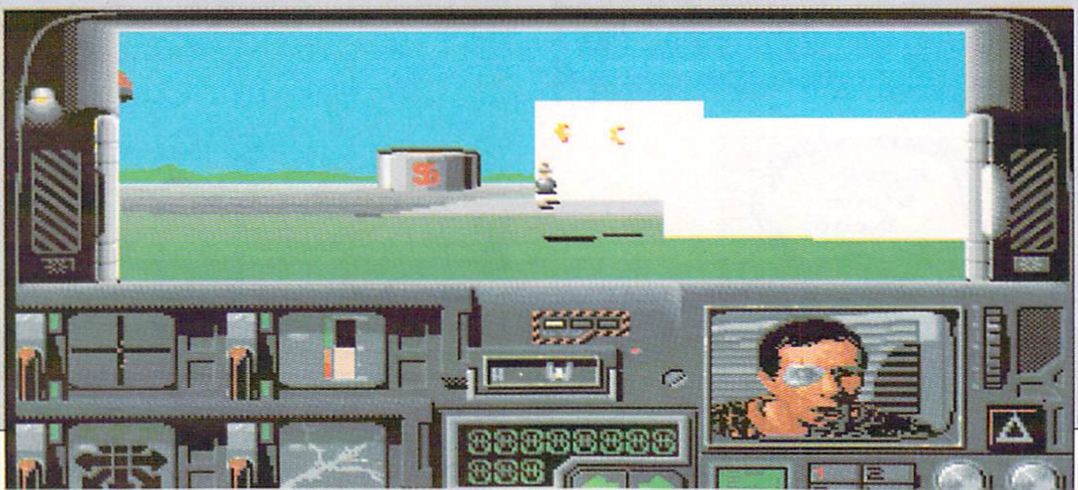
Resolution 101 works well. The graphics are fast, and all 12levels of play enjoyable. If it came to spending the rest of my life in jail or playing Resolution 101, I know which I'd prefer.

John Kennedy

Resolution 101
£24.95
Millenium

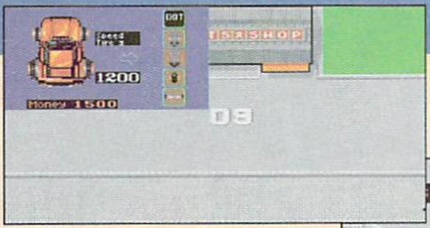
Sound
Graphics
Gameplay
Value

Overall – 81%

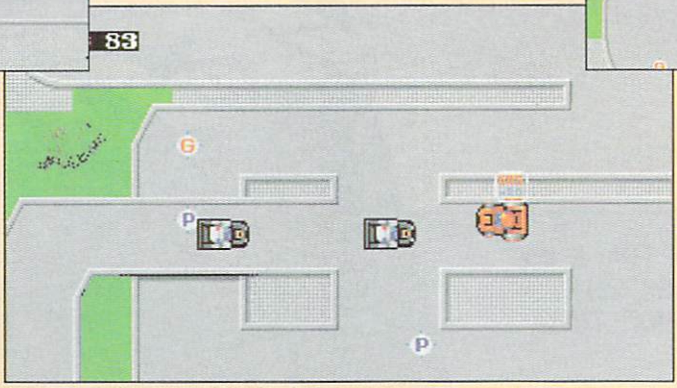


HOT ROD

Typing in the Fast Lane







Inner city road racing is definitely a bad thing

NOT very many people know this, but in my spare time I am a grand prix driver for Ferrari. I've even been known to combine my daytime job as an investigative journalist for The Guardian with racing by using a Z88 portable while tustling with my old mates Prost and Mansell at Monaco.

Not easy with thick gloves on I can assure you, but thankfully my excellent co-ordination, allied to 100 w.p.m typing, produces error–free copy every time. Obviously with a background such as this the chaps at *Amiga Computing* had little choice but to offer me the latest driving game to come out of Activision for review.

This superb conversion of a Sega coin-op is the hottest speed sensation on the circuit (myself not withstanding) so I was eager to test my mettle against it.

Now, here's a little competition for you. There were only two accurate or honest statements in those opening paragraphs - can you guess what they were ? No ? I'll tell you then. Hot Rods is the latest driving game to come out of Activision, and it is a Sega conversion.

Super Sprint players, or Badlands players if you want to be more up to date, will immediately recognise the 2D top down graphical style of the game, allied to four large cars, any of which can be human controlled. Yup, up to four can play if you have one of those Microdeal adaptors that nobody stocks so you have to go to a computer show to buy one.

The objective is to race around the track (bit of a tricky concept there I know) and finish first or second to continue on to the next level. Running out of gas naturally precludes you from further competition. If playing against three computer teams, the gas factor is the only one to really worry about, as finishing first or (more commonly) second is relatively easy.

The difference between this game and the Super Sprints of old, and the Badlands that will be released next January, is that the screen scrolls in Hot Rods. Should you be at the back when the screen – which follows the race leader, of course – does another lurch forwards then you lose valuable gas (which can be collected from cans around the course anyway) and are dumped into second place.

Due to the proliferation of gas canisters, it is worth the sacrifice to get yourself promoted in the race order if you happen to be losing. With three or four human players you find people racing backwards just so that they can get repositioned in second place with the flag approaching.

In between these races of total silliness there are extras which can be added on to the car to help it hold the road in certain weather conditions, and basically make it go faster and sustain more collisions. Unfortunately you can't add weaponry to shoot people.

The trouble with Hot Rods, besides the idiocy of the repositioning business, the feeble squeeks from the speakers, and the depressingly bland graphics, is that it is just far too easy. After 17 or so levels, on only my second go at that, they start to repeat themselves as well.

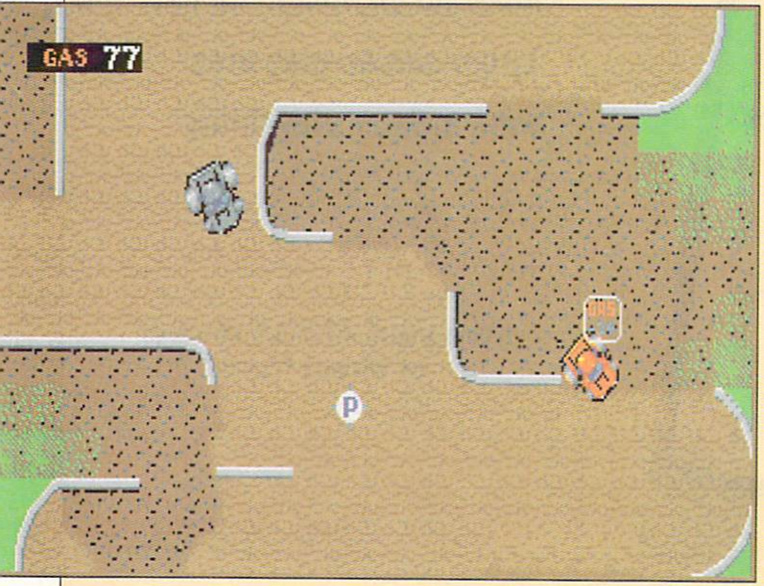
With three friends taking part it does become more competitive in a brutish and crude sort of way, but as a one player game Hot Rods can only be considered as a cure for insomnia. Even if you can't drive a formula one racing car while using a Z88 I think you'll find this far too easy.

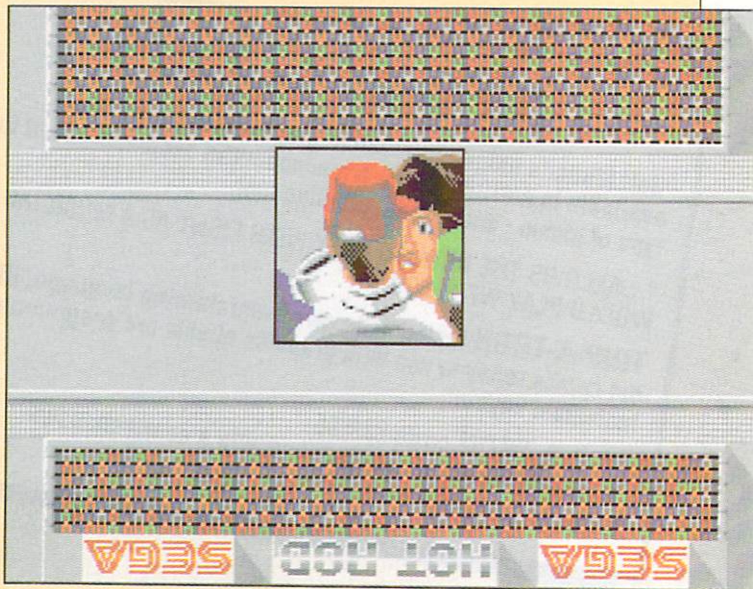
Duncan Evans

Hot Rod
£19.95
Activision

Sound	
Graphics	
Gameplay	
Value	

Overall – 65%





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SSI/U.S. Gold
Aura
Graphics
Gameplay
Value
Overall – 91%

FIRSTLY, I must emphasise that Champions of Krynn is not the sequel to Curse of the Azure Bonds, even though it utilises an enhanced engine from the Forgotten Realms series. Krynn is, in fact, the first in the Dragonlance series.

The story starts after the War of the Lance has finished. The dragon armies are planning revenge for that defeat. Their aim is to quash the forces of good with the help of the Dark Queen thus making her, and evil, total rulers of Krynn.

Improvements and changes to the Forgotten Realms series are as follows. Firstly, the magic system has been changed. It is controlled by three moons, each representing a god (good, neutral and evil).

You'll need to choose carefully as each moon brings its own benefits due to the mage's power varying with the waxing and waning of the moons. That said, though, you are unable to choose an evil mage in Krynn.

So along with the need to memorise and study spells, the chances of mages dominating the game are reduced – a good thing as the AD&D system is particularly susceptible to this. The gods also influence clerics, who'll need to choose a divinity to receive specialised deity powers.

Combat, although important, has been re-designed to a more balanced level. There are not as many random encounters, the numbers of monsters reach about 10 instead of the previous 30 to 40. In addition, the monster's hit points are reduced so they are easier to kill.

There are plenty of tough individuals though – don't think you've got off lightly.

An interesting wrinkle in this modified system is that certain characters produce new game elements. Kenders (a cheerful thief-type chappie) replace Halflings and Solamnic Knights replace Paladins.

The former have the unique ability to taunt an opponent, while the latter have the unique personality trait of giving away a portion of their valuables – noble fellows that they are (stupid, but noble).

Then there are the Draconians. Surely this bunch of critters are the programmer's revenge, because when they are killed they either turn to stone (trapping your weapon), blow up (!) or turn into a pool of acid.

Fans of the books will be glad to see Dragonfear make an appearance. This morale killer emanates from mature dragons but is only really troublesome to low level characters.

Finally, your choice of characters makes a difference. For example, only if you have a Solamnic Knight in your party will you be allowed to play a particular sub-adventure (the prize being some fancy plate armour).

Krynn is a vast improvement over the earlier games which, in this fast developing area, are now looking creaky. Pool of Radiance had boundless freedom and very little plot while Curse of the Azure Bonds had a good plot but little freedom. Krynn has both plus, unusually for an SSI game, no little intrigue.

There are a number of sub-plots to draw you into the game, there's even a romance in there!

The game is pretty big, coming on three disks along with a 60-page Adventurer's Journal, 12-page instruction book, reference pamphlet and poster – value for money or what?

The market for RPGs is split down the middle. There are those RPGs which concentrate on puzzles, interaction, etc (Ultima) and those RPGs that concentrate on hack'n slash and other action elements.

Champions of Krynn falls into the latter category – and as such offers the highest quality production and most professional game design yet see in its class.

Addictive, detailed, with a balanced combat/magic system that can be recommended to combat aficionados, Krynn is SSI's best yet. I can't wait for the next!

Paul Rigby







More than just numbers and dice

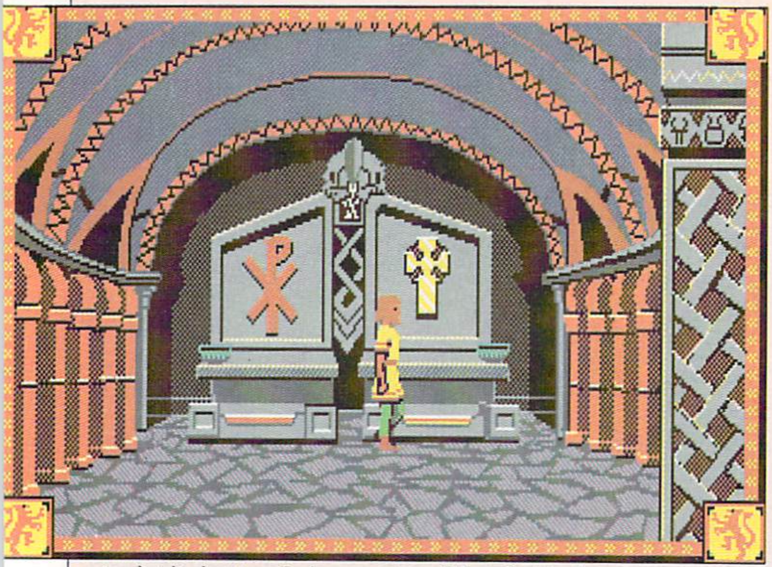


CONQUEST OF CAMELOT

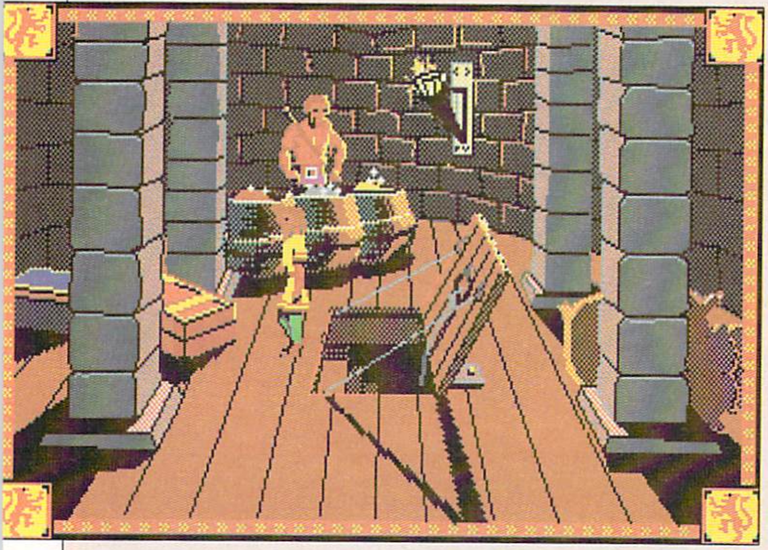
Fetch me a shrubbery



Tintagel? Glastonbury? Wherever it is this is the fabled castle of Arthur



Any knight about to embark on a quest would be well advised to get some useful assistance from a greater power



OVER the years Sierra has established a reputation for itself as a quality programming house, producing graphic adventures in its own unique style.

Game content aside, users have a love/hate relationship with the Sierra style – cinematic opening sequences and scene setting, occasional use of animation, mouse controlled character movement.

But love it or hate it, you can't deny it is one of the elements that makes a Sierra product something distinctive and special.

Sierra's latest offering, Conquest of Camelot, involves you taking on the role of the legendary King Arthur in his quest for the equally legendary Holy Grail.

The games designer, Christy Marx, tells us that the King Arthur story is an unfathomable mixture of myths, legends and truth, and that her own interpretation draws on a number of these not strictly within the traditional Arthurian set.

In practical terms, this makes for a game which feels more rounded than the usual myth/legend based adventure, providing a fuller background against which to set the all important task of Grail-hunting (it also means it's not too easy for anyone who knows their Mallory).

The game comes on a hefty six disks – the whole of the first disk being used for the usual Sierra-style scene setting. And so, without further ado.....

As king of all you survey, life can never be problem free. In your case, the problems are close to home and start with the forbidden love between Gwenhyver your Queen and that famed knight of the round table, Launcelot. Your forgiving and tolerant nature has meant that you have turned a blind eye to their shenanegins, but their love has cast blight on your soul and caused a curse to fall on your kingdom.

Fruit has withered on the vine, grain dies of disease and springs and wells turn foul. Your people are unable to farm, and are hungry – they cry out to you for a miracle.

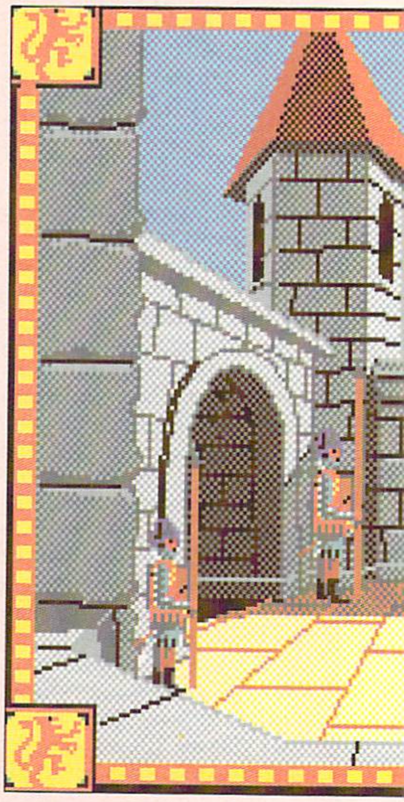
Meanwhile, a vision of the Holy Grail appears to you one day, and you send a trio of knights after it. They fail to return and, after a time, you set off yourself in search of both them and the Grail. Needless to say, the fate of the entire kingdom rests on your success (or failure).

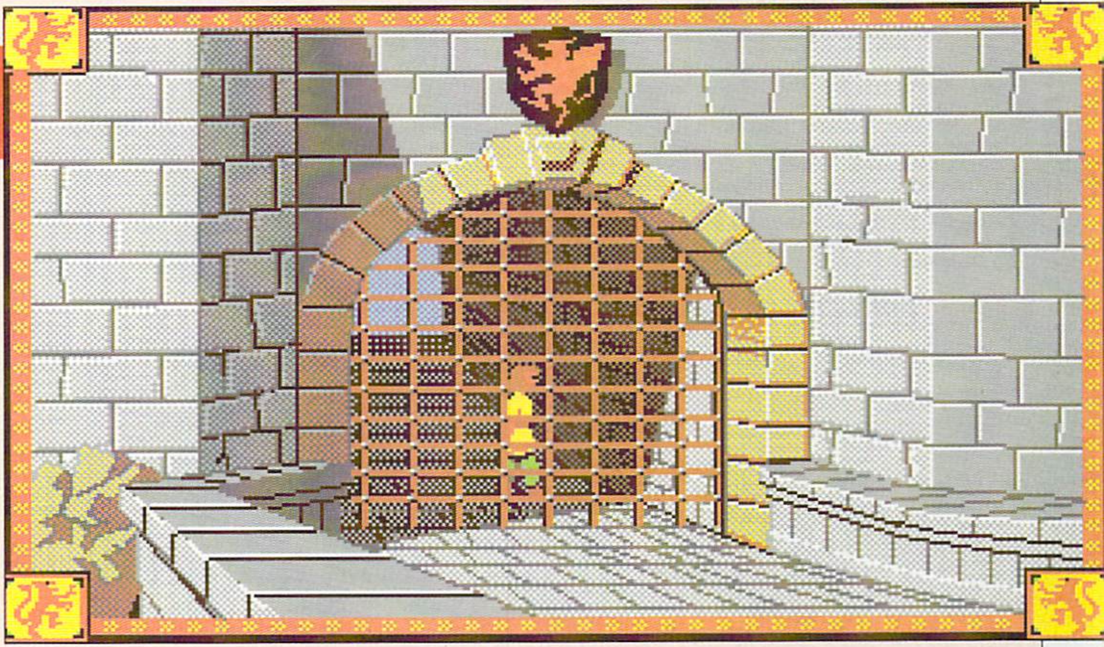
Your quest begins in Camelot Castle, but soon extends to the South of England and later throughout Europe and the Middle East. That's a lot of locations (17 in England alone), and a lot of action – hence the six disks. The first step is to successfully consult Merlin who will furnish you with the map you need to make start on the English part of the search.

You will need to prove your skills with the trusty Excalibur if you are to succeed in your quest, but brute force alone will not be enough. You will also need to understand matters like herbalism and the language of the flowers to help you along the way.

Many adventures look very pretty, and have appealing storylines, but its the parser that really makes or breaks an adventure. The authors of Conquest of Camelot are to be praised for their efforts in this department.

Consider the following. There I was, in Camelot castle, trying for a quick pray for spiritual guidance before starting the Quest. I saw a couple of bowls on the altar, and





Green takes his five minutes exercise break

decided to "Examine bowls". I was very helpfully informed, though I got the distinct impression that someone, somewhere was having a joke on me, that "They are not bowls. They are altar candles". Oops!

Scoring operates a little differently to usual in this game. You score three different types of points – for Skill (max of 368), Wisdom (max of 293) and Soul (max of 358). This system works quite well, except that unlike in previous games, scores are not continuously displayed on the work screen.

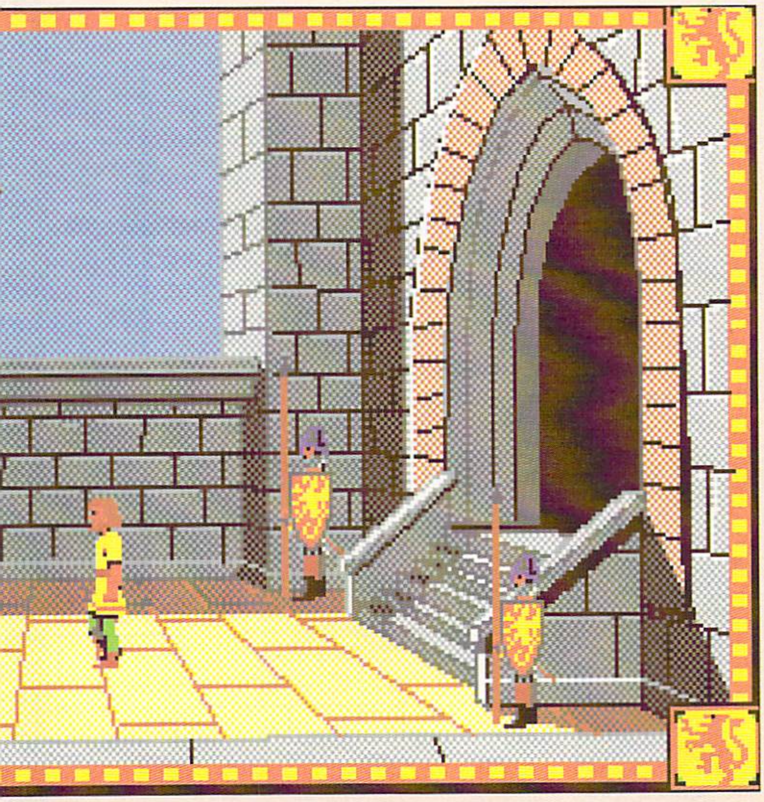
Instead you have to call up the menu bar and access scores from there. And as if to add insult to injury, scores are the bottom option on the furthest right menu. Remember that handy invention, the "keystroke alternative"? Well, for most of the menu options, there is a keystroke alternative, but, you've guessed it, not for getting a peek at your score. This makes life very tedious for those of us who want to keep track of the increments we gain from particular actions.

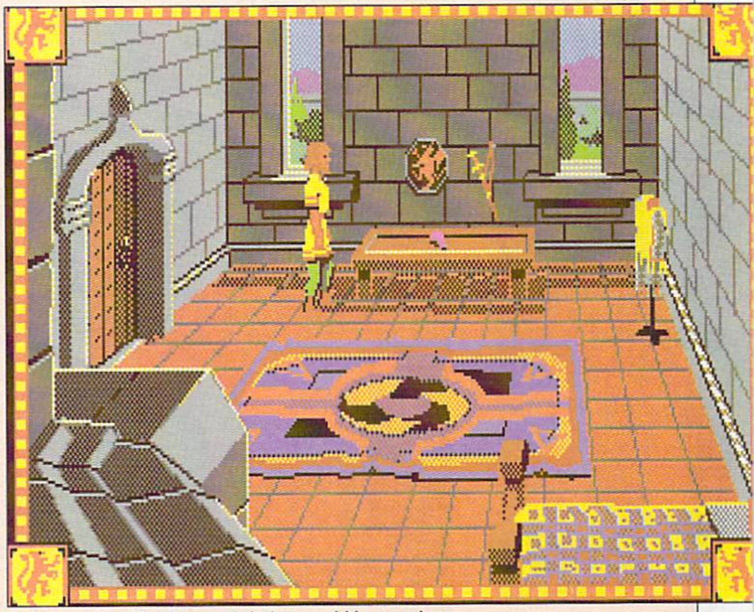
Conquest of Camelot will be a long time a-solving, even for the most hardened adventurer. It's a mighty game, and one which yet again reaffirms Sierra's position at the top of the adventuring tree.

Sandra Vogel

Conquest of Camelot *£39.99* *Sierra*	
Aura	
Graphics	
Gameplay	
Value	
Overall – 83%	







Before setting off a change of clothes would be in order

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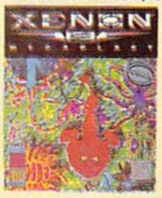
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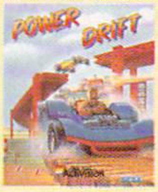
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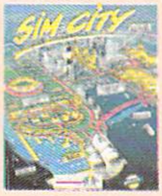
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STORM ACROSS EUROPE

Some sort of hat seems to be in order

BACK in the old days, before world leaders who are too wimpish to start a war (good on them), storm clouds regularly gathered over the peaceful plains of Europe. Wars were about as regular as the Olympics and about as casual.

The 20th century changed all that. No more popping off to war for a few years and coming home rich and famous. No more letters to The Times complaining that the tea supply had dried up. At last mankind had discovered total war in all it's gore.

One man most fondly remembered for giving this country powdered eggs, gas masks, the Blitz, evacuated children, air raid shelters, one rasher of bacon a week and Messerschmitt shoulder was Hitler. Now you, too, can stand in the shoes of a man who more than any other in history had a real chance of ruling the world.

Storm Across Europe covers the entire war period from the failed Munich accord to the sacking of Berlin by allied troops. The game is divided into periods of three months during which you can manoeuvre your troops and mercilessly attack weakly defended positions causing great loss of life.

Three players are represented by the game: Germany, the Allies and Russia (who presumably weren't as allied as the rest of the Allies). This means that up to three people can play with the computer playing the rôle of any country left over with the exception of Germany, which must be played by a human – the strategy algorithms obviously aren't up to being a despotic fascist. It takes a human to do that.

Naval power is very well simulated. Actually it is only adequately handled, but that makes it superior to most other strategy games of this type. U-boat fleets will patrol the Atlantic putting paid to the Lend-Lease scheme and troop transports are absolutely vital in the Med.

Every year the production targets for each country must be reset. This includes research, which can increase the effectiveness of all your units and develop new weapons. The penalty for this is resources – the more you spend on research the less you have left to re-enforce your army. What you do here is probably more important than your strategy in the field.

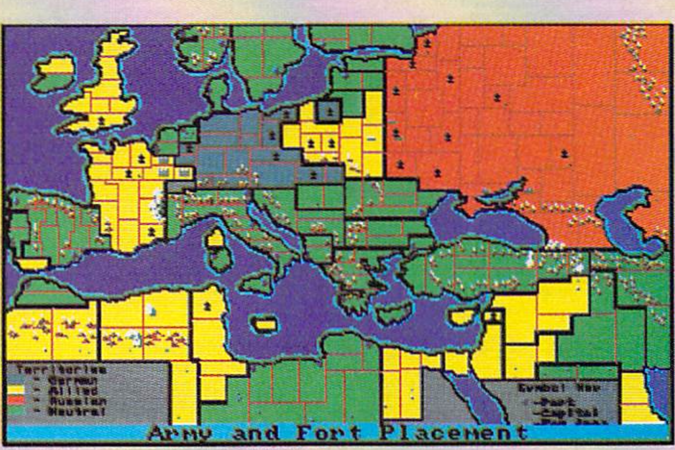
Of course, resources include raw materials, your population and the number of factories, and these come from capturing territory. The real strategy to this game is the effective management of the materials involved, rather than the fighting itself.

The order-giving system is easy enough to understand and use, but it is best to approach the order phase in a systematic way to be sure you don't miss anything out.

Detail is missing on the actual units – only large armies and garrisons are taken into account, but this must be considered against the scope of the game. On the whole there is not much scope for cunning Rommel/Monty type tactics, just management of large armies battering against each other. And the only time tactical skills are severely tested is during a waterborne invasion.

The lack of unit tactics makes this not one for those who consider themselves the re-incarnation of General Patton, more a neo-Hitlerite interested in the management of a world domination machine.

Lucinda Orr

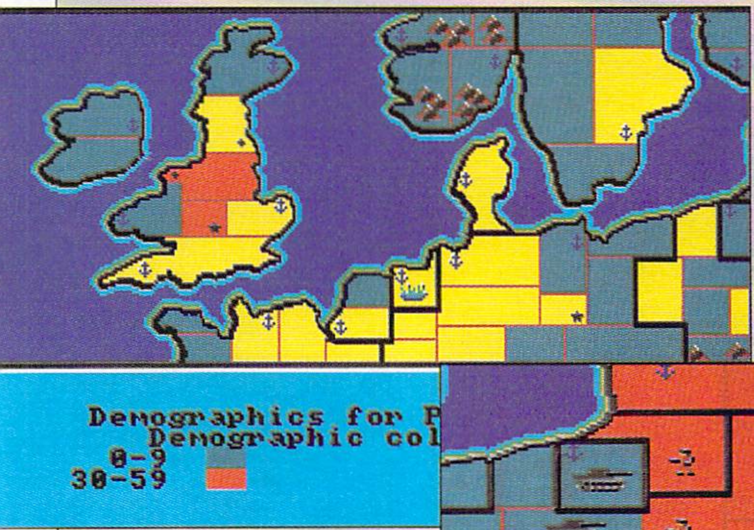


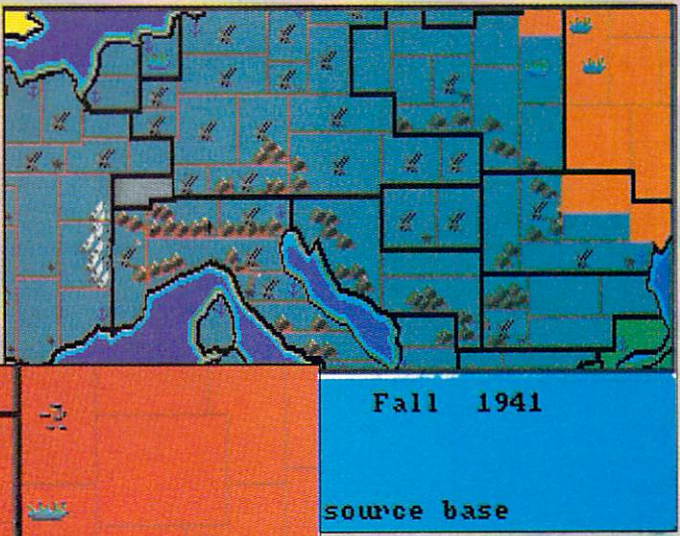
Strategic overview of the battlefield. Resources, population and armies can be examined in this way

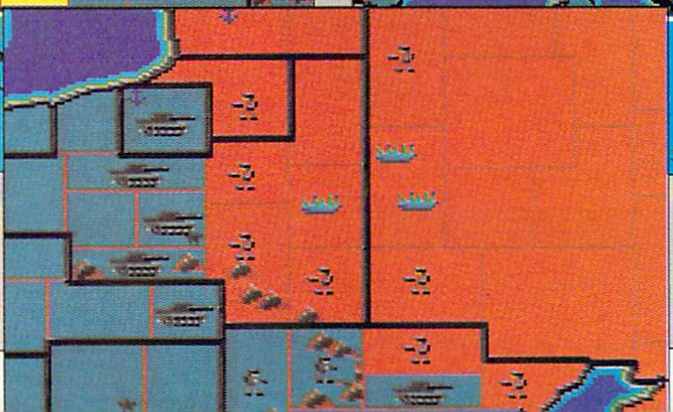
Storm Across Europe
£24.95
SSI/U.S. Gold

Realism
Strategy
Gameplay
Value

Overall – 77%







They disembarked in '45, no one spoke and no one smiled, there were to many spaces in the line...

NINJA SPIRIT

Make mine a double



I HAVE never understood the fascination that hackneyed plot writers have for all things animal like. This predeliction borders on the obsessive when the authors are Japanese, and becomes almost a fetish when the turgid prose acts as guideline for a leapy leapy, jumpy, jumpy ninja game.

Ninja Spirit is the latest follower of this path, casting you as Tsukikage, the spirit of the great white wolf. Why, is what I want to know? Don't they realise that wolves are horribly smelly, moult all over the place, have fetid breath and slobber continuously ?

Is this a good role model for a ninja? Or anyone bar a Millwall supporter? No, I think not. Yet in Ninja Spirit you are the spirit of this wolf, intent on slicing and dicing the beasts in the bowels of the earth. And their masters, too.

Very laudable I'm sure. Right, just a mo while put my brain in a jar for half an hour and play the game.

This conversion of an Irem coin-op starts with you, Mr Ninja, strolling along the boardwalk (but nowhere near the sea), waving your shiny new sword around menacingly. Along come balding ninjas, leaping enthusiastically through the air, only to be skewered on your weapon.

The screen scrolls along sideways quite respectably, and a Far East tune throbs from the speakers. Your armament is not limited to the sword, with which you can strike a number of poses, but includes throwing stars, throwing axes, and a retractable grapple on a rope.

Strangely enough the grapple is one of the more deadly weapons, if a little slow. It's main advantage is in blocking spears and other incoming missiles, while stretching out to disembowel your opponent. After collecting the soul of a ninja (once you've gutted a particular one, that is) your weapons become far more effective, but unfortunately you also receive the attentions of yet more ninjas. These ones seem to squat in mid air,fading in and out of view while attempting to stick you with a spear.

These chaps wouldn't be so much of a problem if it wasn't for the earth burrower who wriggles along underneath the boardwalk, perpetually spiking you from below. Only the sword can be used to stab downwards and finish him, which involves much frantic weapon swapping, and usually death if a mid-air ninja appears while all this is going on.

Death results in you being replaced at the beginning of the section you were traversing at the time, but the problem is that these sections are far too long, so you have to retreat too far. After struggling to the end of this level you meet one of the evil one's guardians, who will promptly blow you off the screen. And this was only the first level.

Truly skilled ninjas can expect to see bottomless marshes, fraying rope bridges, collapsing boardwalks and sheer rockfaces (up which you must go).

After I spent considerably more than half an hour trying to get that far, alas I couldn't manage it, and neither could anyone else I asked. While the graphics and sound are all quite reasonable, they don't impress to any degree, leaving the difficult gameplay to either challenge or frustrate, depending on your competence.

Although a reasonable coin-op conversion, Ninja Spirit is really just too difficult to be worth bothering with. To be honest, the only spirit I had any interest in afterwards was not of the white wolf variety.

Duncan Evans



Armed only with a pair of pyjamas Mr Ninja meets his foe



Moving faster than something that moves quite fast



Ninja Spirit
£24.95
Activision

Sound
Graphics
Gameplay
Value

Overall – 73%

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SUPER GRID RUNNER

He's back – and this time he's mellow

FAR out on the western spiral arm of the galaxy is a small blue-green planet called Earth. The ape-descendant inhabitants of Earth are still a bit on the primitive side, for although they now know that digital watches are not the peak of technological achievement, they still get very excited by personal CD players.

They also spend a great deal of time and money building themselves various electronic computing devices to perform routine tasks, such as payroll accountancy and word processing, in an attempt to save time and money.

Then one day, a man with a rather bad cold walked into a computer shop somewhere in England and bought a Vic 20. This man was called Jeff Minter, and this is not his story.

Instead it is a story of what he created, his favourite animals and some of the best rock music ever recorded. In other words it's about computer games, llamas and Pink Floyd.

If you have never heard of Jeff Minter, nor "Attack of the Mutant Camels" then either I'm getting old or you have lived a sheltered life.

Minter's games have a simple approach to things. You shoot them.

Many ape-descendants find this activity strangely relaxing. The complete non-use of their brain (achieved by linking a joystick directly to the eyes via an overworked central nervous system) can cause great enjoyment.

The Earth inhabitants who own Amiga computers have been unlucky in that Minter games have not been available.

Until now, that is. For creatures who hand over quite a small number of coloured pieces of paper in shops will now be able to play a genuine Minter game at home.

The graphics are simple, colourful and flash so brightly that any life forms more advanced than humans (dolphins, mice and so on) may find that actual physical pain is induced.

Sounds are similarly pyschedelic (if such a word may be applied to sounds) and when amplified are almost, but not quite, totally unlike a Disaster Area concert.

There are a large number of levels with which the earth creature may choose to begin the mindless destruction.

These proceed with a definite lack of seriousness. Some might say they are fun. They would be right. They are indeed, as they say, fun.

John "Douglas" Kennedy

AMIGA COMPUTING AWESOME

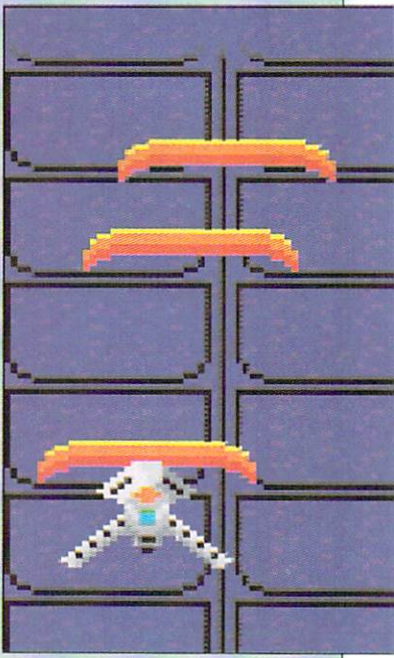
Super Grid Runner
£10.95
Llamasoft

Sound
Graphics
Gameplay
Value

Overall – 86%



Everything from insects to dinosaurs gets the Minter treatment



Engage interstellar overdrive





COMBO RACER

Kickstart 1.4?

RIDING around the perilous streets of the City of London on a Honda H100s is one thing but roaring around a race track with a colour co-ordinated sidecar is another.

That's not to say that I wouldn't like to try, but I'd like a little practice on say a Kawasaki GPz 550 first.

However, failing to raise three grand for such a machine, I'd rather spash out 25 quid for Combo Racer and play that.

After all, Combo Racer does have the advantage of being some £2975 cheaper, you don't get all hot and sweaty from wearing all the protective gear, your hair doesn't feel lousy as the sweat circulates over your scalp, and the only real damage you can do to yourself is to contract joystick finger or fall off your chair when you realise that this is a very good game (Bah! You big pansy).

Combo Racer is the product of one of the best programming teams in the country, Imagitec Design. It's playability largely depends on whether you like fast action racing game. Personally, I've had enough to last a lifetime, although I must admit I'd much rather play this than many others.

My first impression of the game was one of disbelief. The title pages makes use of a truely awful digitised black and white picture of a motorcycle-sidecar combination.

There are eight tracks to race around and you will need to qualify for a starting position on each of these. Once you have completed all eight, you progress to the next level where the going gets tougher.

There are three levels and each must be completed before being promoted to the more difficult stages.

Your vehicle, equipped with a side car, carries both you, the rider, and a pillion who's job it is to keep the bike balanced around those tight corners.

What makes Combo Racer so playable is the inclusion of team spirit. Two people can play at once. However, they don't compete against each other but instead have ultimate control of the combination.

Joystick one has control of the machine while joystick 2 controls the pillion. Once both players have got the hang of the controls and know how to balance the machine, some pretty hair raising speeds can be maintained around those corners. In single player mode the human controls only the machine, the pillion crawls about under automatic supervision.

Although eight tracks are more than you find in many games, Combo Racer has the added advantage of a track editor. Accessible from the main menu screen, the track editor allows you to modify any of the existing tracks or begin from scratch and design your own.

Edited tracks can be saved to memory or permanently to disk. Those saved to memory can be practised and then edited again if required.

There's nothing more boring than racing around flat lanes, so the track editor allows you to create hills and valleys with fantastic effect. You can even dig out a tunnel or two along the course. One thing however you can't do is make crossroads – a shame but not too disappointing.

On technical merit, Combo Racer scores highly. It's graphics are fast and colourful with a rescaling routine that's second to none. The undulating motion of the screen when ascending or descending hills is very good, however hills do not seem to affect the performance of your engine.

The sound too is not harsh as in some racing games and the noise of other vehicles indicates that there's someone up your rear end.

My one complaint is of other racers passing – the bikes simply fly, especially when you've crashed. Whoosh – a noise then a dot on the distance. Still this dosn't spoil what is really an enjoyable game.

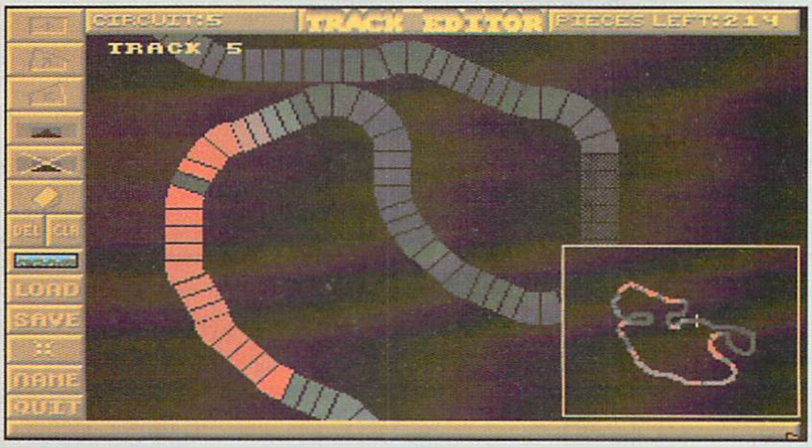
Andrew Banner



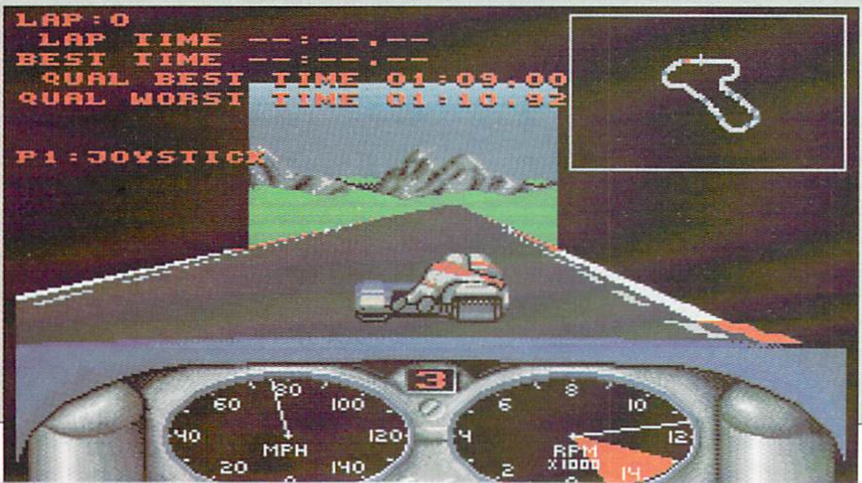
Combo Racer
£24.95
Gremlin Graphics

Sound
Graphics
Gameplay
Value

Overall – 81%



Designing the track is easier than using Scalextric



Approaching Altrincham on the road from Wilmslow

DAMOCLES

A funny thing happened on the way to Eris...

I'VE been late for appointments before, but four years is stretching it a little. Still, this is roughly the time that has expired since the president of Eris sent out a call for help, before you crash landed on Targ. Four years after the events of Mercenary and the Second city, you are back on course to Eris, answering the plea for help from the doomed planet.

Of course you probably finished Mercenary a long time ago, and have had to spend the rest of the time waiting in hyperspace for Paul Woakes to finish Damocles, the solid 3D polygon successor to Mercenary.

And now he has, but was it worth the wait, and is the game worth all those 90 per cent plus reviews that hordes of other magazines give to an unfinished game? Read on and see.

Travelling to Eris reveals the same dull control panel used all those years ago, which is fine for continuity's sake, but scores nil points for style. Sadly, the very same squeeky sound effects have also been lovingly dusted off and represented for your dismay.

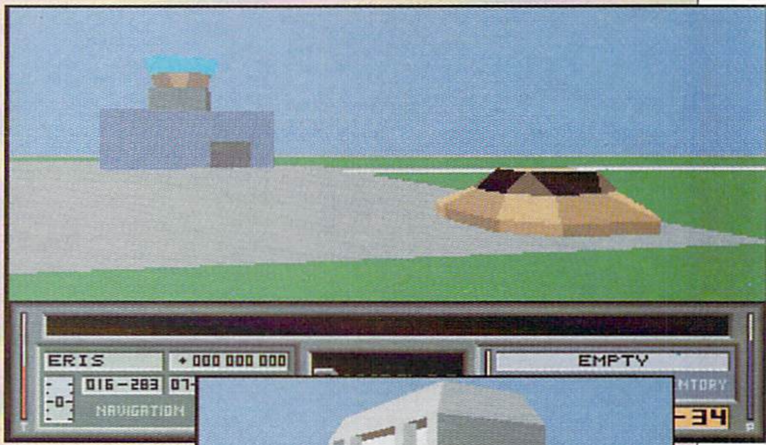
Never mind, once you land on Eris things start to look up, and not just at the stars. Landing at the spaceport reveals a solitary structure with a car outside. Your key is inside the building, along with directions to the president's apartment block.

A nice drive follows as you navigate down a road towards the apartments and your long–delayed appointment. You can, of course, simply not bother going but head off in any direction you like, admiring the flat and barren landscape.

Obviously there weren't any overcrowding problems on Eris because even the cities consist of great empty tracts rather than cosy suburbia or densely-packed and decaying inner city. This rather detracts from the game, giving it a lifeless and empty feeling. Of course there aren't any citizens around either because they've all been evacuated or fled.

Why? You find that out when you converse with the president's voice in her office. The comet Damocles is heading this way, and in only three hours will impact the planet, utterly destroying it – well, what do you expect when you name a planet after the goddess of discord?

A timer counting down adds to the tension, but the fact that the spaceship you are given by the president is capable of interplanetary flight, making escape at any time, possible tends to reduce it considerably. What you are doing is rescuing an empty planet from destruction. The president offers you a bagfull of cash, and sends you off to a professor's lab, as he was working on a solution before you arrived.





Hurry up or you'll be late – as in the late Duncan Evans

Apparently he had found one, and then disappeared without trace. One fast flight over pancake land later, and you can investigate further, as clues are profferred, along with the method of destroying the comet. You want bombs and explosives, and are set on a trail to follow.

This trail will lead you through a mere 20 per cent of the gameworld, so there is plenty more to explore. It isn't pointless exploration either, as there are apparently numerous ways in which to rescue Eris if you should chance to find them or think of alternatives. Either way, finding the teleports that allow you to travel from planet to planet without time-consuming spaceflight is essential.

While the flight aspects of the game are undeniably very fast, they are so because of the simplistic nature of the planet. No other moving objects (save planets), flat and empty landscapes, and buildings which appear half sized rather than growing from a small blur.

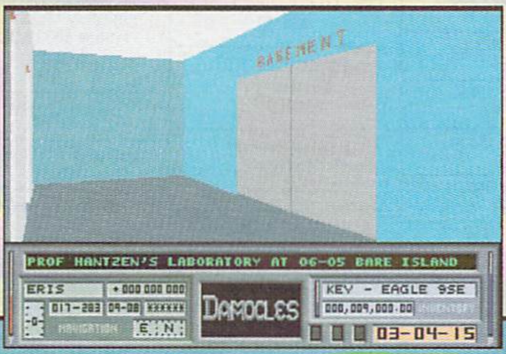
Inside the various buildings it's Freescape time, with exactly the same lumbering movement, and exactly the same blank painted walls. This is allied to a message and document reading interface which can only be described as tedious.

So four years on, has it been worth the wait? Does Damocles deserve the rave notices it has attracted? Is it worth shelling out £24.95 for?

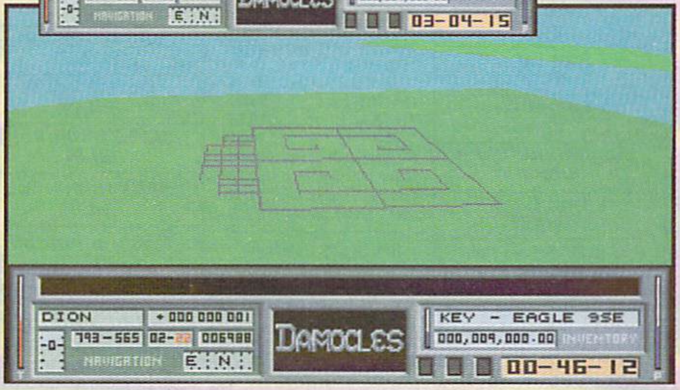
Well, if you like Freescape-style games, with an unfolding plot, a chance to try out alternatives that are not signposted but may work, and some very fast flying thrown in just to keep things moving, then yes it is worth buying.

I don't think Damocles is worth the 90 per cent scores though, I'm not impressed with a product that has taken nigh on four years to complete, and with its barren and empty atmosphere, not interested enough to play it in my own spare time either.

Duncan Evans



It all looks a bit familiar – rather too familiar



Damocles ***£24.95*** ***Novagen***	
Sound	
Graphics	
Gameplay	
Value	
Overall – 73%	



THE DISK





GreySlayer

FANCY a bit of pot-holing? A bit of old fashioned underground exploration of the hack and slay variety? Good, because that's what we have here.

GreySlayer is an arcade adventure. You take control of an armoured knight and must guide him through a maze of 78 underground caverns, most of them containing resident nasties. But things aren't quite as simple as they seem.

Somebody has built doors down there. Red ones and blue ones. And whoever built them didn't forget to add the Chubbs, so to complete your quest you're going to need some coloured keys.

Release the prisoners and they'll each leave you a gift. It could be a key, a weapon or some food. If it's not a key, you'll have to search elsewhere for the means to get past that door.

Once the appropriately-coloured key is on-board you'll be able to pass through the door to the next level by getting as close as you can to the door and using the key.

Before helping the prisoners, of course, you'll probably have to fight off a few baddies. When you start the adventure you are armed with only a sword. Press the fire button on your joystick to use it, but make sure you are facing your enemy and close enough for combat or he might just steam in and waste you!

Later on you'll be able to collect a couple of other weapons – a longbow for dealing with fast moving enemies and an axe for throwing at heavily armoured beasts. Again, press fire to activate these weapons once they have been chosen from the menu.

Ah yes, the menu. To call up the menu screen pull back on the joystick and press fire while still pulling back. On the menu screen you'll see two rows of icons. Move the stick left or right to move the cursor, move the stick up or down to choose which of the two cursors to move. Pressing fire carries out the command. For example, if you wanted to look at your sword you would move the top cursor on to the sword, move the bottom cursor on to the Look command and then press fire.

Tread with care underground because your field of vision is only a few yards in each direction. There are many nasties lurking just out of sight and lots of fatal slime wells and fire pits waiting for the nonchalant knight.

READ ME FIRST

GREYSLAYER is a big game – it takes up the best part of a disk – so we put it on the cover disk in a compressed format called an archive. You can't run the game from the cover disk. First you'll need to prepare a blank disk and run a script file which creates a game disk for you.

Booting from your standard Workbench, prepare a blank disk in the normal way. Make sure you name the blank disk GreySlayer and install it after it has formatted.

Then boot from the cover disk and double click on the GimmeGREYSLAYER icon in the GREYSLAYER drawer. (If you don't want to boot from the cover disk, make sure you Assign C: to CD011:C before running Gimmeups into consideration.

If you have two or more drives you can put your blank GreySlayer disk into DF1:, DF2: or DF3:. If you have only the one drive but a ram expansion fitted, the script will attempt to keep disk swapping to a minimum by using your extra ram in the copying process.

If you have one drive and no extra memory, then I'm afraid you're in for a fair bit of disk swapping. Sigh.

At the end of the process you'll have a bootable game disk. Stick it in DF0: and boot it up to play. (If your GreySlayer disk won't boot it is because you forgot to Install it.)

MusicBox

ANOTHER month, another tune. This one, MemoryDust, is my personal favourite. Reminds a bit of the stuff they play in discos in those old sixties and seventies films. Very Starsky and Hutch.

There was a massive response to the Name That Tune competition a couple of months back. Just about everyone agreed that the tune was the soundtrack from the classic DOC demo called Demons are Forever, and most people spotted that the MusicBox version played slightly slower than the original.

I'd like to thank Chris Caines of Bristol for the one-thousand- million-squillion pound cheque he sent as a bribe. Unfortunately The Whistling Bank refused to cash it due to insufficient intelligence.

Rick Lemon of East Grinstead tried to put the squeeze on me by suggesting that Pink Floyd is the greatest rock band the world has seen. Can't argue with that. I almost let him win.

Richard Wykes of Harrogate says that if I don't let *him* win he'll pack up his Amiga and buy an ST. I should see a doctor about that, Rich. They've got all sorts of cures these days.

Ashley Howes of Norwich even drew me a picture of the demo, which we all had a good laugh at. (Don't call us...)

But the winner is Chris Freestone from Windsor. Chris wins for having the stupidest nickname this year, The Atombender.

THE DI

Converter

CONVERTER is a utility that allows you to transfer graphics between a number of different formats. If you are a programmer involved in graphical manipulation you should find this a very useful program.

It will work with any type of IFF graphic. All screen modes including HAM mode are supported. Two types of bitmaps can be loaded or saved, sequential or interleaved, and both can be saved with or without masks and/or colourmaps, before or after the main bitmap data.

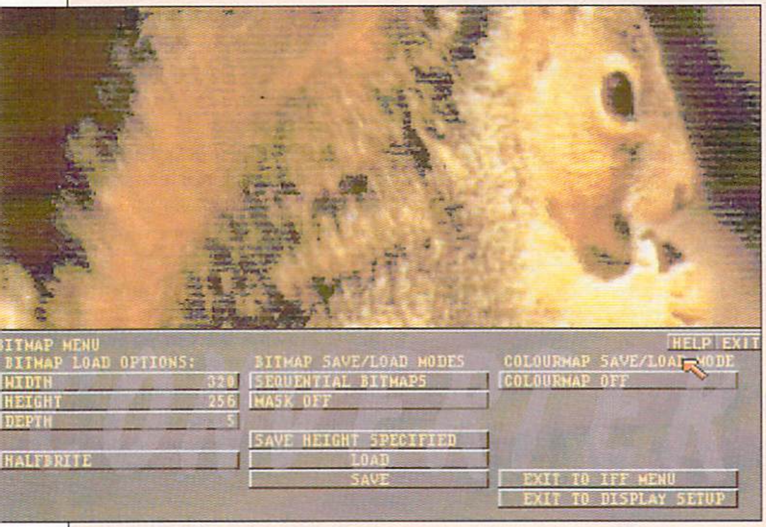
Ever found yourself needing the colour values of a graphic so you can include it in your own program? Normally the only way of getting them is by looking at each colour in an art package and writing them down.

Converter will make your life easier by saving colourmaps separately. It'll save the full 32 colour palette either as a binary dump or as assembler source code. A special feature, block cut-out, takes the current graphic and splits it into 16 x 16 blocks, each saved one after the other, making it easy to insert graphics into a game. Useful for maps and the like. Again, sequential and interleaved formats are supported.

A graphic can be saved as a sprite file if you like, either as assembler source code or binary data in 4 or 16 colours.

If you need to transfer graphics to or from the Atari ST, then Converter is just the ticket because it can load and save in the Degas Elite .PI1 low resolution graphics format.

Detailed instructions of all Converter's functions are on the disk – double click on Converter.DOC to read them.



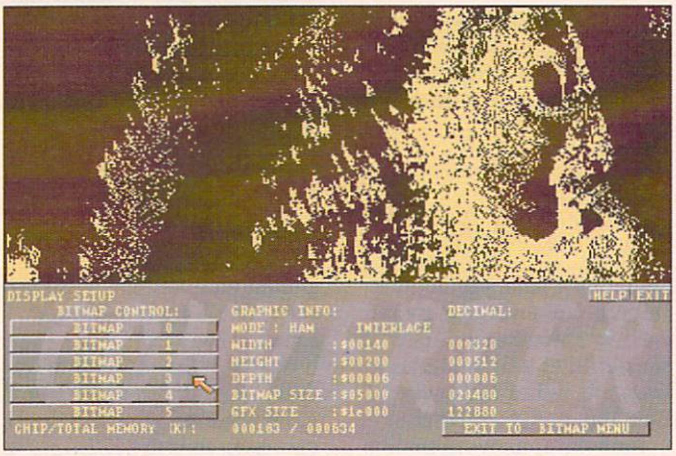
CONVERTER v1.00 is Copyright © 1990 Steve Chalmers, All Rights Reserved.

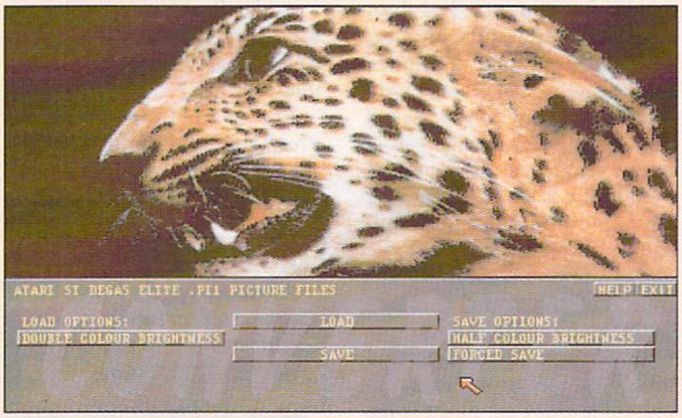
It is shareware. If you start using it regularly, please send a fee of £10 to: Steve Chalmers, 10 Overton Park, Dyce, Aberdeen, AB2 OFT.

Send the fee along with your name, address and version number of Converter that you are using. This will entitle you to updates as and when they appear, help with any problems and news of other programs that Steve has written.

Of course, if you don't use Converter, then don't bother.

Converter runs in PAL mode only. If you would like an NTSC version, get in touch with Steve at the above address and he will code a version for you for a small fee.





TEM

TEM is The Effects Machine, a sound sample utility which allows you to load or create samples, edit them, perform special effects on them and save them.

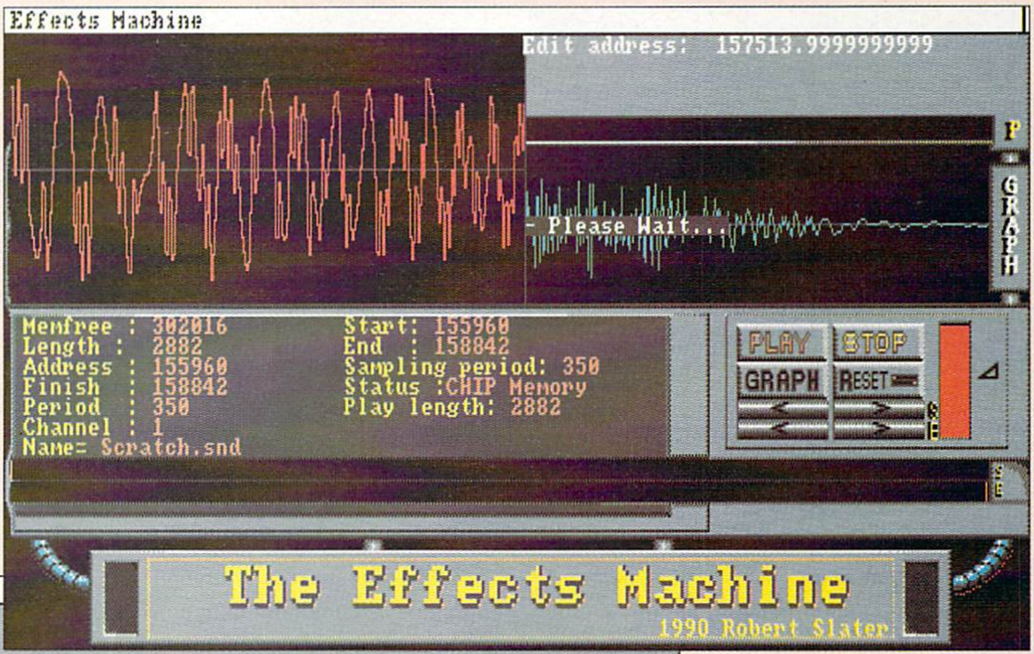
TEM will load standard IFF samples or the binary-type samples used by Soundtracker, Noisetracker, MED and the like. There are four short samples on the disk in TEM/Sounds for you to play with.

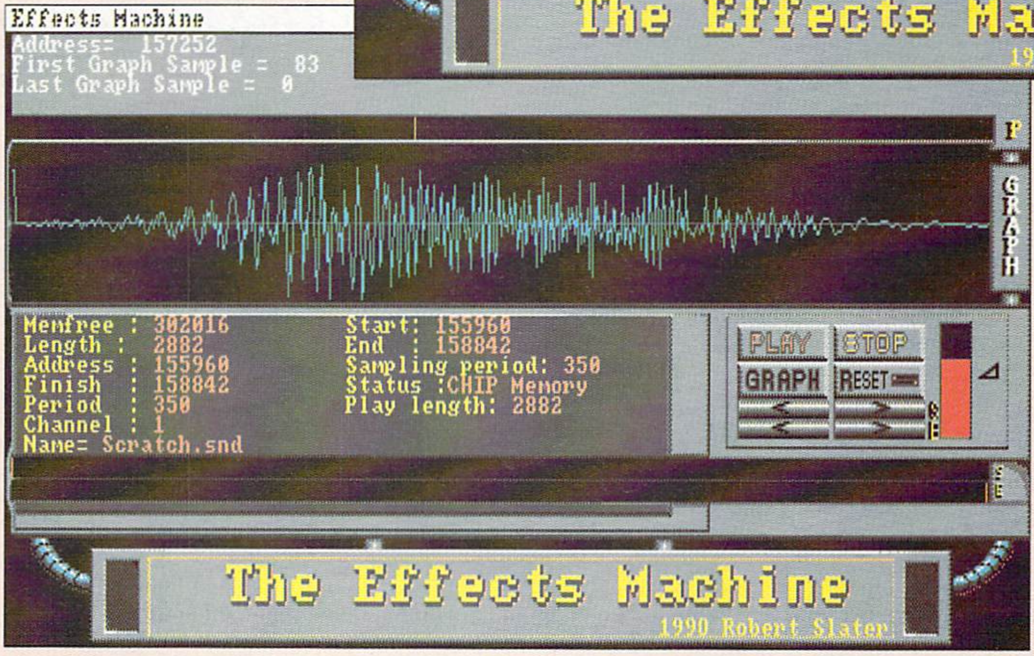
If you're interested in how the program works, the source code is on the disk (EffectsMachine.BAS.pp) crunched with PowerPacker. Double click its icons to view it. You can get a hardcopy of the listing by clicking PPMore's Print gadget. If you want to customise or play with the listing you'll have to decrunch it first. Use the Decrunch command from the CLI:

```
decrunch
cd011:tem/effectsmachine.ba
s.pp ram:tem.bas
```

Then copy the tem.bas file from ram to your regular source code disk. Decrunch is in the C: directory of the cover disk.

Remember, TEM is written in HiSoft Basic, not AmigaBASIC. If you try to run the listing with AmigaBASIC you'll get a number of errors and, very probably, a guru.





General Menu

PLAY START: Type in the address of where you want to play the sample from.
PLAY END: Type in the address of where you want the sample to end.
PLAY PITCH: Type in the pitch you want the sample to play at.
NEW CHANNEL: Select this item to change to a new channel.

The Effects Machine has 20 channels, meaning you can have a maximum of 20 samples in memory at once. When you start The Effects Machine you are automatically in channel one.

You can use the cursor keys to change channels – the right cursor key increments the channel by one, the left cursor key decrements the channel by one.
SYNTHESIZE: This allows you to create your own sounds consisting of three basic waves – sine wave, square wave and ramp wave.

For example, if you are working with a music program such as Soundtracker or MED, here is how you would create an instrument that would be compatible:

Make the sampling period 302, the volume 63, the note F#, the octave 0 and the length 10000. The volume value is set to 63 because this sometimes helps to reduce overload errors when performing effects on the sample.
REPEAT PLAY: Toggles between the sample playing continuously and the sample stopping when it has finished.
FILTER MODE SWITCH: Effects the band pass filter (see Special 2 menu).
GET VOLUMES: Gives you the average volume of the sample.
MEMORY HACK: Allows you to pull samples from memory that aren't stored in an Effects Machine channel. Use with extreme care because this allows you to alter what is stored in the Amiga's memory.
KEYBOARD: Lets the Amiga keyboard (qwertyu, zxcvbnm) act like a two-octave musical keyboard. *Caps Lock must be off for this feature to work.*
OCTAVE: Change the octave of the keyboard.
FILTER CORRECT: This deals with waah and various filter functions of the Special 2 menu. All it does is place a zero at the start and end of the sample. It sometimes improves filtering.

Effects Menu

METALLIC: The smaller the number you enter, the harsher the sound.
BACKWARDS: If you enter 2, half the sample will be reversed.
FLIP: Flips the whole sample backwards.
MIX: Digitally mix two samples together. Before selecting the mix menu you are advised to change the current channel to the channel of the sample you want to be mixed into.

On selecting mix enter: 1) The channel of the sample you want to mix, 2) The channel of the sample you want it to be mixed with, and 3) The address in the sample to be mixed with where you want to mix the sample.
EXPAND: Lets you stretch out the sample without altering the pitch.
COMPRESS: Does the opposite of Expand.
TREBLE WAAH: This makes the sample start out dull, then gradually get brighter. A good value to use is about 10.
FADE IN: This works in the area between the Play Start and Play End markers.
FADE OUT: Does the opposite of Fade In.
ECHO: Echo Rate states when you want the echo to start. If you enter 2, the sample will echo half way through the sample, if you enter 8, the sample will echo an eighth of the way through the sample. Echo Decay states how quick you want the sample to get quieter. If you

➤

enter 32 (out of 64) the sample will decay by half of its volume every echo, if you enter 48 the sample will decay by one quarter of its volume every echo.

ALTER VOLUME: If the sample is too loud, distortion will occur. If the sample is too quiet, aliasing distortion (hiss) becomes more audible.

WAAH IN: This is virtually the same as Treble Waah. The only difference is that this function doesn't make the sample get brighter, it muffles it gradually. So the sample is muffled at the start and not muffled at all at the end. If you want to do a Waah Out, you will have to flip the sample, do a Waah In and then flip the sample back again.

INTERPOLATE: Allows you to change the period, pitch, frequency of the sample, thus altering its length.

DISTORT: How to make a weird instrument: Select Synthesize and synthesize a ramp wave. Make the sampling period 302, the volume 63, the note F#, the octave 0 and the length 10000. Select Treble Waah, using the value 10. Select Waah In, using the value 20. Flip the sample. Select Distort. Eh, voila, you have a weird instrument.

To use this instrument with Soundtracker, select Save As Dump from the Projects menu, and save it on to a Soundtracker disk.

Project Menu

LOAD & CATALOGUE: Select this if you're not sure where your file is.

QUICK LOAD: If you don't like the file requester, you can choose this option instead. You must type the exact path to your file, not forgetting the filename itself, of course.

LOAD AS DUMP: Soundtracker and its many clones use samples that are binary dumps, not IFF files. Choose this option if you know your file is in this format.

RENAME FILE: You'll be asked for the old and the new filename.

DELETE FILE: For when you want to make a little extra room on your samples disk.

SAVE AS IFF: Writes the file to disk as an IFF 8SVX sound file.

SAVE AS DUMP: Writes the file to disk as a binary dump.

QUIT: For when playtime's over.

Special 1 Menu

SPECTRUM GRAPH: Displays the harmonic components of the sample.

The volume of the component (harmonic content) is vertical, and the frequency of the component is horizontal. The graph helps you find the actual frequency of the sample, if you know its sampling period.

Note that you *must* select Spectrum Analysis before selecting Spectrum Graph because this only displays what a previous analysis has stored in memory, it doesn't actually do any calculation.

INVERT SOUND: Turns the sample upside down.

SPECTRUM ANALYSIS: Otherwise knows as Fourier Analysis, this calculates the data for the spectrum graph. Once done, you don't need to do it again unless you want to see the spectrum of a different sample.

HARMONIC FILTER: This is a graphic equalizer.

Special 2 Menu

SMOOTH WAVEFORM: Smooths the waveform, muffling it slightly.

LOW-PASS FILTER: Removes high frequencies like hiss and whistles.

HIGH-PASS FILTER: Removes low frequencies, like rumbles and bass.

BASS BOOST: Allows you to alter the volume of the bass frequencies.

CENTRALISE: Makes the sample central on the graph.

BRIGHTEN SOUND: Adds a harsh whistle, which can sound good on some samples and awful on others. Mainly awful.

TREBLE BOOST: Allows you to alter the volume of the treble frequencies.

BAND PASS FILTER: Handy for removing clicks and pops, plus it sometimes decreases hiss.

You have to state the range of frequencies you want to remove. If you are in detailed filter mode (Filter mode switch) you will be asked the filter depth. The larger the number you enter, the more the frequency is reduced.

The band pass filter allows you to remove frequencies of a certain volume. You have to state the maximum volume of a frequency that can be removed. This is handy for removing hiss, as hiss is normally quiet, so you enter a small volume, and thus only the hiss is removed.

TREMOLO: Adds a warbling effect. Typical values to enter are 200 and then 64.

THE DI

Memory

CHIP MEMORY: Allows samples to be loaded only into chip memory. To play a sound sample you must have it loaded into chip memory.

FAST MEMORY: Allows samples to be loaded only into fast memory, in other words a memory expansion. Note that you can't play the samples that have been loaded into fast memory.

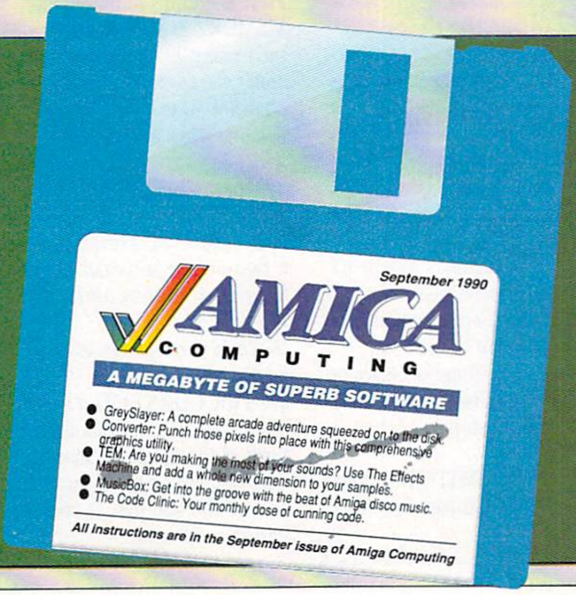
FAST TO CHIP: Transfer a sample from fast memory to chip memory.

CHIP TO FAST: Transfer a sample from chip memory to fast memory.

EDIT WAVEFORM: Allows you to edit a section of the current waveform by using the mouse. You enter the address of where you want to edit and a window displays a section of the sample starting from the address you entered. You then press the left mouse button to draw on the sample.

To exit from this function you have to press the Q key, making sure Caps Lock is off when you do it.

CUT SAMPLE: Sets the current range – the section of sample



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SK

Menu

between the Play Start and the Play End – to zero.
DELETE SAMPLE: Removes the whole of the current sample from memory.
COPY TO NEW CHANNEL: Copy the section of one sample and place it in a new channel.
ADD CHANNEL TO CHANNEL: Sticks sections of two samples together and places the result in a new channel.
CLEAR MEMORY: Removes all samples stored in the Effects Machine's memory. Use with care.

 It was written by 17-year-old Robert Slater from Stockport over a period of two years.

Robert is a bit of a sound and music synthesis freak. In between studying for his A levels he has also written a 4 track sequencer similar to Soundtracker. (Which we're all *dying* to see, Robert!)

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Please let us know which files, if any, your submission needs from the Workbench disk. If it is clickable, feel free to design an original icon. But don't make it too large. And please use the standard Workbench colours.

Bear in mind that a program which does not run on a 512k machine would have to be exceptionally good to make it on to the disk.

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Don't forget to duplicate on the disk label the program name, your name, address and phone number. If you want your disk back, enclose a self-addressed, stamped envelope.

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Address ....
....
....
Daytime phone..After ....am
Evening phone ....After......... pm
Submission name ....
Submission size....................bytes in total

We will accept submissions up to 500k in total length, including documentation. But the shorter your submission, the better chance it stands of getting on to the disk. If it is a compiled or assembled program include all the source code, but do not count this in the size of the submission. Write a brief description of your submission below. If it consists of more than one file, describe what each file is for. Attach an extra sheet of paper to this form if necessary:

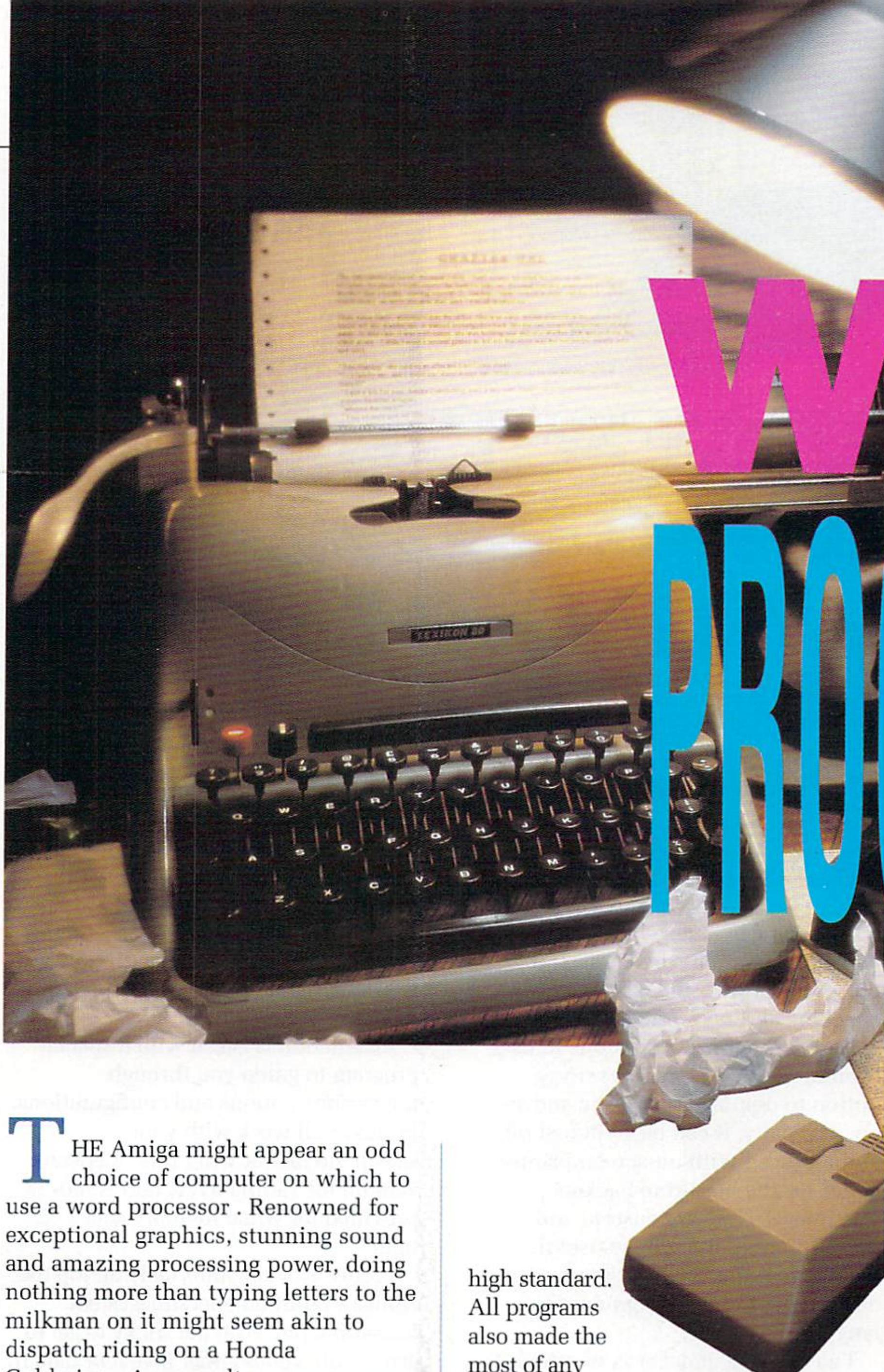
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Post your submission to: Amiga Computing, Cover Disk Submissions, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP



Word PROCESSING PART 2

In the second part of our word processing special we concentrate on the various packages available for your Amiga. Which is best for which application? Find out as the team puts the products through their paces

THE Amiga might appear an odd choice of computer on which to use a word processor . Renowned for exceptional graphics, stunning sound and amazing processing power, doing nothing more than typing letters to the milkman on it might seem akin to dispatch riding on a Honda Goldwing. As a result, programmers have two extremes to aim between:

1. Completely ignore all the Amiga's bits and bobs and treat it as if it were a PC, or:

2. Go completely over the top in graphical user interfaces.

This means you have a nice choice of style when it comes to Amiga word processors. If you can't stand the cute and furry Amiga interface, you can plump for something like Protext which can bear more than a passing resemblance to a CLI window.

If you want a maximum user-friendly extra-sweet drinking chocolate type program, then you can try something more like the PenPal's of this world.

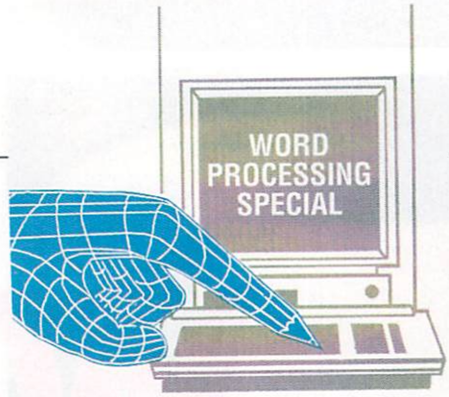
With respect to documentation, it was a great relief to note that all manuals – even of the cheapest package – were of a very high standard. All programs also made the most of any extra hardware available, and could easily be installed on a hard drive.

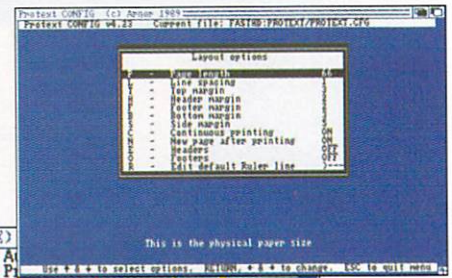
After using many, many products, I can safely say that word processors bring out the best in the Amiga.

In the Pipeline

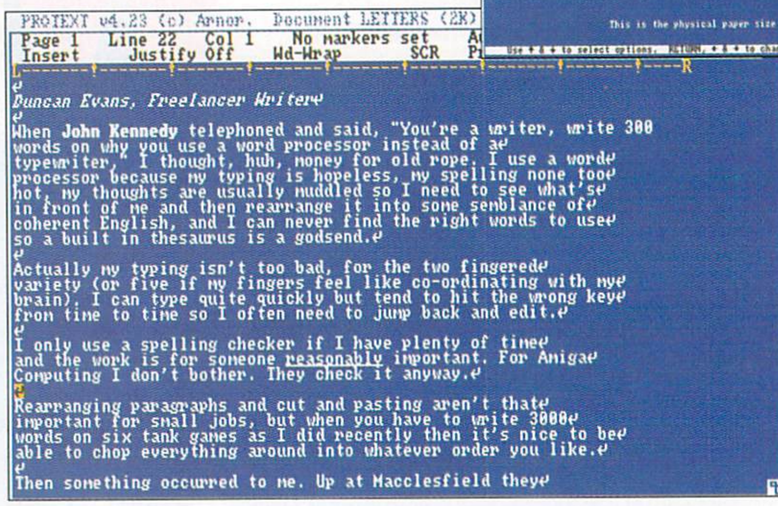
FOR those prepared to wait, there are new versions of several packages "coming soon". The new version (number five) of Protext promises to be well worth the wait. Probably the only feature it won't support will be ARexx. ProWrite is just into incarnation version 3, so keep a look out for it too.

Rumour has it that at long last an update to Word Perfect will be released. With Commodore trying to convince a sceptical business world that IBM isn't the be-all and end-all of computing, this could be good news.





Protext v4.2



PROTEXT has become a firm favourite in the *Amiga Computing* offices, more for historical reasons than any other. Originally written to run on the Z80 based Amstrad CPC micro, it has a solid following mostly consisting of 8 bit up-graders.

The features loved by these people may be despised by others. Protext is totally text based and will not support graphics other than simple IBM style boxes.

The display is brief and functional, with status lines at the top, and the text edited in a (sometimes) resizable window underneath.

All functions are available from pull-down menus, but once you get to know the package, keypresses can totally take over. You only need to touch the mouse to click on the Protext icon in the Workbench.

There are two main modes of operation, easily toggled between with a single press on the escape key. The first is the text entry and editing mode, where you spend your time entering your new novel.

The second mode is a cut-down CLI, where you can change directories, look at the contents of a disk and perform features such as spell checking and text formatting.

One of the few concessions to user-friendliness is a simple wysiwyg option to display bold, italic and so on. Typically, it can be switched off and replaced with on-screen printer codes for the hard-line hackers.

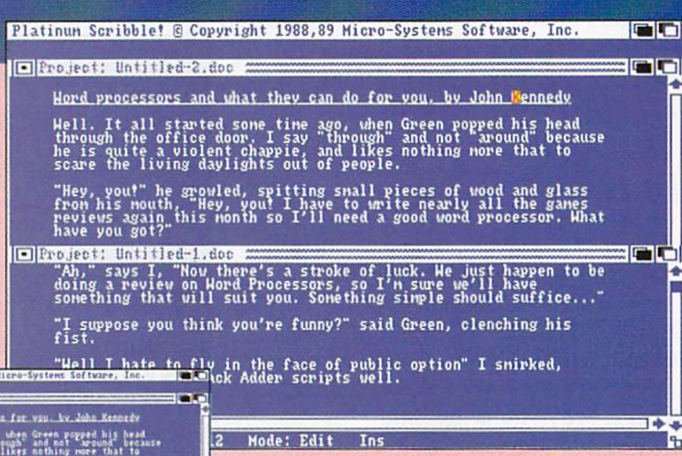
Printer drivers are custom and plentiful. Mail merging is useful, and made more so with the provision of a simple form of programming language.

The spelling checker is worthwhile, but the pattern recognition is exasperatingly awful. The dictionary is English, but you'll soon come across words it doesn't know.

Installation is eased with a special program to guide you through the various options and configurations. Protext will work with your set-up, no matter what it is. A special version for vanilla 512K ram A500s is provided for when memory gets a bit tight.

Protext sits uncomfortably on top the Amiga's Intuition operatingsystem. Incredibly powerful but tricky to get to grips with, you'll either love it or hate it.

Platinum Scribble v3.02



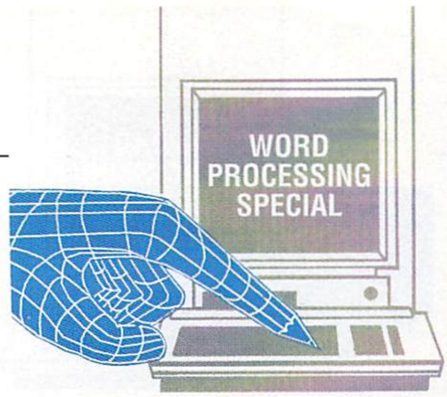


SCRIBBLE lies somewhere between the totally wysiwyg multiple font graphics processors and the serious CLI lookalike systems. I can't help thinking it's the offspring of a ProWrite/ProText alliance. Perhaps it should have been called WriteText. (Hey, what brilliant name!)

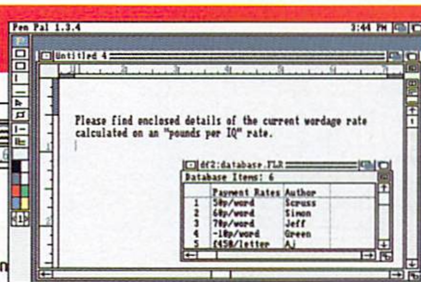
Font control is limited to the standard *italic*, **bold** and <u>underlined</u> affairs.

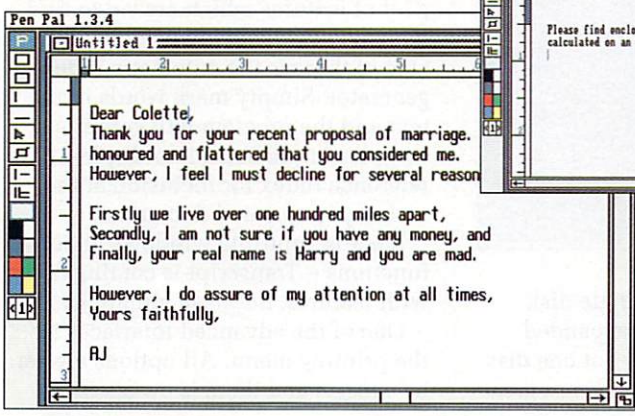
There can be four documents open at any one time, each a fully sizable window. Scroll bars move you around the text, and the current word count can be popped on to the screen with a single keypress.

If there is a gimmick with which Scribble hopes to stand out from the crowd with, it's the inclusion of a thesaurus. No similarly priced word processor has this facility. Would you use it? Erm, I don't know. I rarely do,



Pen Pal v1.3.4





PEN PAL could only happen on the Amiga. At first glance it looks more like an art package than a word processor.

As you might expect, graphic support is good. Picture files in IFF format can be inserted, resized and moved around. There are also a good selection of lines and boxes to draw with, ideal for borders and highlighted areas of text.

When you think you have finished, a delightful preview option will draw a miniature version of the screen to let you see what is going on.

Statistic freaks will love Pen Pal. Instead of a common or garden word count facility, you get a complete breakdown of your text: Average length of words, that sort of thing. It even has a readability index so you know if you're pitching your prose a bit high.

Fonts can be selected by name, or rather cunningly, by size as well.

Something which may take a bit of getting used to is the way the pointer changes shape depending on what you are doing a the time.

It's not like an art package where the arrow changes to a little paint brush, it's more a piece of on-line help. As you move the pointer over an icon, some text appears telling you what will happen.

In use, Pen Pal seems a bit sluggish. Nothing severe, the letters just take a fraction of a second to appear after you hit the keys. You wouldn't notice if you stare at the keyboard while you type, but those with more than just a little keyboard experience will get a dose of jet lag.

Pen Pal is unique in that it comes with an integral database. This is quite a good idea when you think about it, because when you're writing text you are probably making reference to pieces of information such as names and addresses so it makes sense to keep them in the same context. Keep this is mind when you compare the price of Pen Pal to other word processors.

but they are people who would. Even with American spellings. Still, it's nice to know it's there, just in case you do need it.

Scribble is the smaller brother of the Excellence! word processor. The missing features include font and text layout support, grammar checking, Postscript output – in other words the kind of stuff that you won't need if you're a home user typing out "I'm sorry Johnny wasn't in school today" letters.

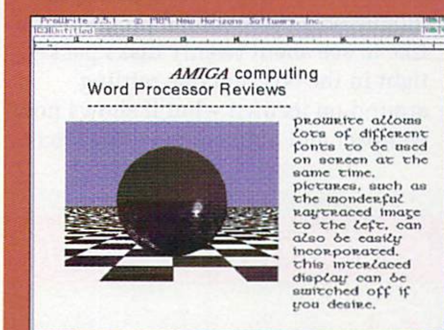
As such, it represents good value for money. If the missing facilities are going to annoy you, perhaps you should save up. But remember – you'll be paying around three times the price of Scribble for them.

ProWrite v2.5.1

WHEN ProWrite loads you might think "Uh,oh...this looks a bit like Notepad to me". And you'd be right – it does look a bit like Notepad.

The reason for this is that ProWrite has a wonderfully Amiga-ized front end. It is so refreshing to use a program which uses Intuition so completely. By doing so, you'll probably never need to look at the manual.

Like Notepad, you can play with fonts. In fact all the fonts can be on-screen at once, simultaneously even. In different colours. Interlaced or not interlaced.



It's great for producing a fancy letterhead. Plus, if you are lucky enough to own a good quality printer – a laser or 24 pin – you will be able to output the fonts with extra smoothing. Not perfect, but better than nothing.

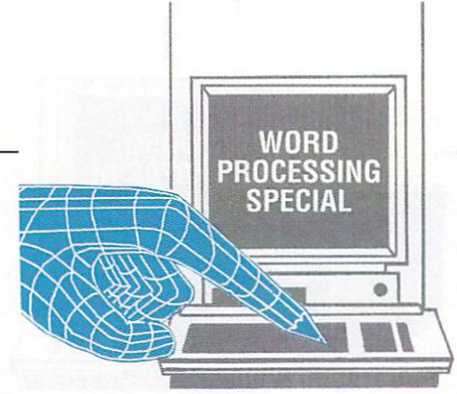
To speed things up when you aren't using fancy fonts or pictures, you can choose to use the standard printer output.

For an even fancier letterhead, you can incorporate all types of IFF graphic files directly into the text, HAM format included. Once in place they can be resized, shaded for black and white printers and have text flowed around them.

Although the number of menus might seem minimal, they are jam-packed with features. Spell checking, date or time insertion, word counting: they are all here.

ProWrite seems to be the ideal word processor for new Amiga owners. If writing letters on Notepad is too tedious, and the thought of having to learn how to use a whole new program fills you with fear, then this is the package for you.

It's friendly, flexible, fast and what's more it's actually fun!



Transcript v1.0

GOLD DISK, perhaps better known for its DTP titles Pro Page and Pagesetter II, released the first version of Transcript two years ago. It is still in the original V1.0 form.

Two versions of Transcript – Transcript and Transedit – come on a single disk, along with the bundled spellcheck program. This may seem to be a Bad Thing – when you spend money on a professional program you like to see about twenty disks packed tight in the box, not one rattling around on its own – but it shows how compact and efficient the software is.



Of course, being on a single disk also makes it ideal for unexpanded machines – if you've only got one disk you're not going to be spending a great deal of time doing the disk-swapping dance.

Although quite old Transcript boasts a lot of features which are yet to find their way into more recent releases. One of these is the automatic index generator. Simply mark words in the text and the program will compile a complete alphabetical, multiple-reference index for inclusion at the end of your printed document.

Macros, multiple windows, block functions – Transcript is coming down with features, not flash gimmicks.

One of the advanced interfaces is the printing menu. All options are set by gadgets and there is even a nice

Cygnus Ed Profession V2

CYGNUS ED Professional (known to its friends as CED) is something of the odd man out in this word processor round-up. It claims to be a text editor, but it is so full of features that leaving it out on these grounds would be a sin.

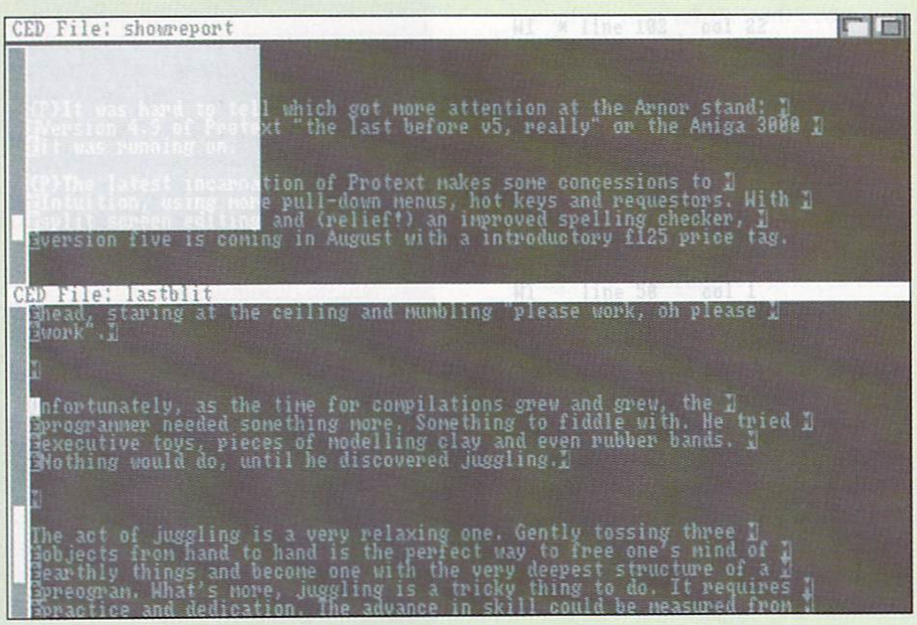
CED is aimed squarely at the Amiga programmer, for it is an ideal system with which to enter source code. And yet it can do so many other things that you can happily use it for typing novels. The only drawback in this respect is the lack of a spell checker.

However, the provision of ARexx support means that CED is only as limited as you want it to be. Theoretically, you will be able to link CED to a separate spell checking program.

CED has clearly been designed for people who use their Amiga to enter text a *lot*. . The "Hot Key" feature alone is worth its weight in floppies in my opinion.

There you are, ideas flooding through your brain in a sudden surge of inspiration, and you have no time to muck around with clicking this and loading that. Just hit ALT, SHIFT and RETURN and CED pops into being. Completely brilliant.

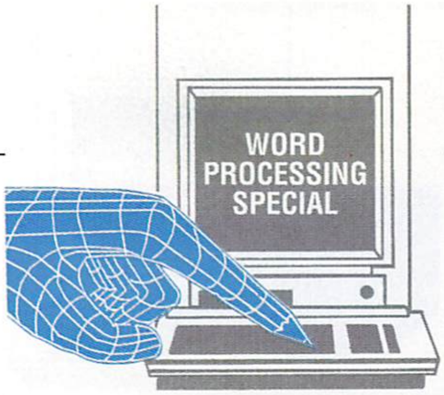




Another feature which may appear as nothing but a gimmick is autosave . After a pre-determined period the program will remind you that you haven't saved your text for a while and ask permission to do so. It can prevent untold misery. As can the resurrection program, which in the unlikely (ha! not with my code!) event of a Guru will worm its way through memory and try to rebuild your files.

Add multiple files, plus multiple windows on the same file, user-definable just-about-everything and you have a complete text workstation, if such a thing exists.

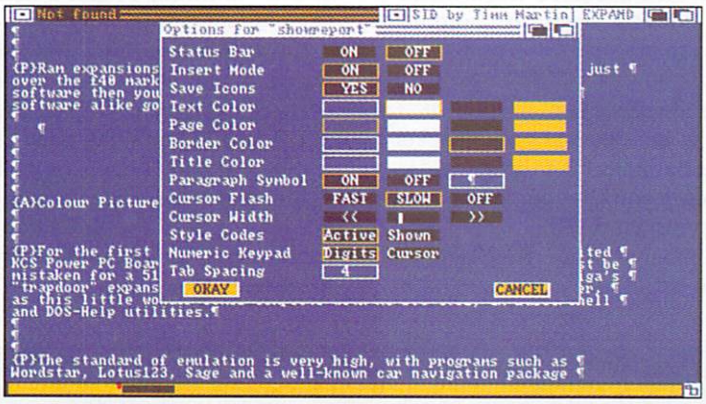
CED appeals to me a lot. It must be the ultimate text editing system. If you want a fast, efficient and powerful way to write code and still want to write the occasional letter, then you need it.



screen preview option which creates a giant scrolling bitmap of your text.

The only real niggle is the spell-checker. This has to be run separately, although it is supported by both Transcript and Transedit. There are around 90,000 words in the dictionary, but of course they're all in American. Nevertheless it is fast and intelligent.

Fast, smooth and powerful, not to mention easy to use, Transcript is still in the running as a professional class wordprocessor.



Word Perfect v4.1

IF it's pedigree in a word processor you're after, then look no further than Sentinel's Word Perfect. Although the program never really caught on amongst Amiga owners, it is in constant battle with WordStar as the number one word processor on PC compatibles.

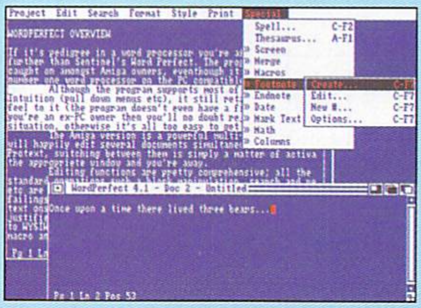
The Amiga version is a powerful multi-window affair that will happily edit several documents simultaneously. Unlike Protext, switching between them is simply a matter of activating the appropriate window and you're away. Although the program supports most of the elements of Intuition, it still retains a very PC-like feel to it (the program doesn't even have a file requester!). If you're an ex-PC owner then you'll no doubt rejoice at such a situation, otherwise it's all too easy to get lost.

Editing functions are pretty comprehensive – all the standard operations such a block manipulation, search and replace are there in abundance.

However, one of the most surprising failings of the program is its inability to display justified text onscreen – although the document will be printed fully justified, the onscreen text remainsjagged (whatever happened to wysiwyg?).

On the plus side, Word Perfect boasts powerful macro and indexing facilities which can be a real timesaver when carry out laborious word processing tasks.

Backing up a darned good text processor are both thesaurus and spell checking facilities. These can either be called from within the main program or (in the case of the spell checker) run as an independent



task, therefore allowing you to spell check disk-based documents without having to wait for the main program to load. The spell checker and thesaurus share a common set of dictionaries.

For such a well respected program, Amiga Word Perfect is something of a disappointment. It's undoubtedly a powerful program which will easily handle even the most demanding of word processing tasks, but its PC-feel makes it a rather cumbersome program to work with.

And what about the price? I just can't help feeling that you're paying for the Word Perfect name.

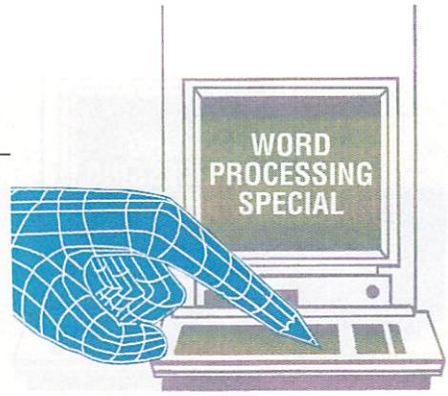
Short and Sweet

IF YOU are in the market for a similar package to CED but with an infinitely programmable interface, you should also consider ToolBox from Mirage Studio (0734 788965) reviewed in the June issue of *Amiga Computing*. The programmer is working towards including an ARexx interface, which will make all sorts of even more wonderful things possible.

For those who already have a word processor but lack word power, Kuma have produced a stand-alone version of Longman's pocket Roget's Thesaurus. It will sit with its little window behind your application (boy, don't you just *love* multitasking) ready for you to click it to the front when you're stuck for words. The dictionary consists of 150,000 words which may be browsed through under catagories such as "abstract relationships", "spatial relationships" and "the material universe". Words are accepted phonetically in case your spelling isn't up to skratch – typing "nieeve" will correctly find "naive".

Half of the fun of this program comes from just wandering around the dictionary, picking up new words. In use, K-Roget is a fast and useful way to expand an existing word processor setup.

Finally, for those with big plans but small budgets, take a look at the Extras1.3 disk which came with your Amiga. Inside the drawer marked Tools is a program called MEmacs (for MicroEmacs, whatever that means). In case you were unaware, its a totally useable word processor. Of course, it might lack one or two special features but what the heck – it's free!



Excellence!

WORD processing for grown-ups, that's what Excellence! feels like when you have it running.

If you're mountain climber, you get the right equipment. When you spend the day repairing cars, you get the best tools. If you're a professional writer, you want a solid, reliable, feature packed word processor. Price is simply not relevant when you're going to be using a program all day, every day.

Excellence! comes pretty close to being the ultimate system, never mind the ultimate on the Amiga. Proper font support, graphics and column layouts make it a worthwhile DTP tool. With the Postscript output option, we're talking seriously high quality with a laser printer or printing bureau on the other end.

For the writer, the fast spell checker is an essential item. The thesaurus is useful in case you get your synonyms and antonyms confused.

The grammar checker? It's like a slap in the face. Well, it is if you take it's comments to heart. Any sloppy writing and it's a "Hackneyed, cliche or trite" warning. Makes a change from "syntax error", anyway.

If you like the Amiga feel to the program (and let's be honest here – not everyone does) you'll be mightily impressed. If you don't need as many features or don't want to splash the cash but like the way it works, try Scribble. And if you don't like Intuition, either buy a PC or try Protext or Word Perfect.

The table below details the various features of all the word processors reviewed – with the notable exception of MicroEmacs which is included for comparison purposes only. The price listed for each package was found by looking around the various advertisers in the magazine – something you would be well advised to do if you are thinking of purchasing .

Features / Word Processor	Price	Min. set up	Spell check	Thesaurus	Word count	ARexx	Mail merge	Wysiwyg	Graphics	Amiga fonts	Macros	Multiple files	Ease of installation	Manual	Ease of use	Speed	Robust-ness
Protext v4.2	£74.99	512k	70,000 English	No	Yes	No	Yes	Yes	No	No	Yes	Yes	Good	Good	Medium	Medium	Good
ProWrite v2.5.1	£102.50	512k	95,000 English American	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Good	Good	Good	Good	Medium
Cygnus Ed Professional v2	£85.95	512k	No	No	No	Yes	No	Yes	No	No	No	Yes	Good	Good	Good	Good	Good
Word Perfect v4.1	£164.00	512k	115,000 English	115,000 English	Yes	No	Yes	Yes	No	No	Yes	Yes	Medium	Good	Medium	Medium	Good
Pen Pal v1.3.4	£99	1Mb American	100,000	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Good	Good	Good	Good	Medium
Platinum Scribble! v3.02	£41.50	512k	104,000 American	470,000 American	Yes	No	Yes	Yes	Yes-ish	No	No	Yes	Good	Good	Good	Good	Good
Excellence!	£159.95	1Mb	104,000 American	470,000 American	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Good	Good	Good	Good	Good
Transcript	£32.50	512k	90,000 American	No	Yes	No	Yes	Yes	No	No	Yes	Yes	Good	Medium	Good	Good	Medium
MicroEmacs	Free	512k	No	No	No	No	No	No	No	No	No	No	Good	N/A	Medium	Medium	Good

Thanks must go to HB Marketing, Word Perfect Corporation, Kuma Computers, ASDG Incorporated and Mirage Studios for supplying us with the products reviewed.

Reviewers:

Nic Veitch – Transcript
Jason Holborn – Word Perfect
John Kennedy – All the rest

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- ★ Further exciting software upgrades in the pipeline
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- ★ For export price please contact us
- ★ Trade enquiries welcome (UK – Scandinavia – Australia/NZ and all English language.)

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GOING UNDERGROUND

Nic Veitch investigates rumours that the A500 is a museum piece

MENTION London Regional Transport to your average capital city dweller and it is unlikely their first response will be anything along the lines of what wonderful hi-tech state of the art frontier breaking technology is involved. But the times they are a changin'.

LRT has woken up to Amiga technology and all the 16-bit advances it can bring, eliminating all that hand-driven stuff and creating true user friendly environments. Of course, all this is nothing to do with the transport system itself. No, all this wonderful interactive, cutting edge 68000-based equipment is to be found in the museum.

The equipment forms part of one of the interactive displays in the new tube centenary exhibition just opened at LRT's museum in Covent Garden.

Two trains are simulated – firstly a reproduction of one of the first tube trains from a hundred years ago, then the new updated 1990 version.

Controls for the earlier train are a little primitive, in keeping with the time. The throttle is nothing more than a large rheostat controlling the current to the engine, the brake lever is a valve controlling the pressure to the airbrakes. Or rather they're not.

A rod rotating thorough the rheostat operates a potentiometer, the brake valve contains a hidden microswitch. Both of these devices are read by a B2000, which performs a few rudimentary calculations to determine just whereabouts the train is and updates the animation. One feature of the old trains which is thankfully not reproduced on the simulator is the tendency of the throttle to arc, sending showers of white hot sparks all over the cab.

Two actors relive the good old days in a rebuilt 1890 train which forms part of the exhibition





The two A2000's in their modest surroundings – the A500 sits on the floor!

The other setup is a bit more cunning. The train of today has a large weighted arm control. By twisting the lever and pushing it forward the arm will release the brakes and an optomechanical coupler will respond to the arm being moved forward and drive the motors.

This also fulfils the function of a "deadman's switch" – pressure must be applied to keep the train moving forward, otherwise the arm will slide back and the brakes will come on.

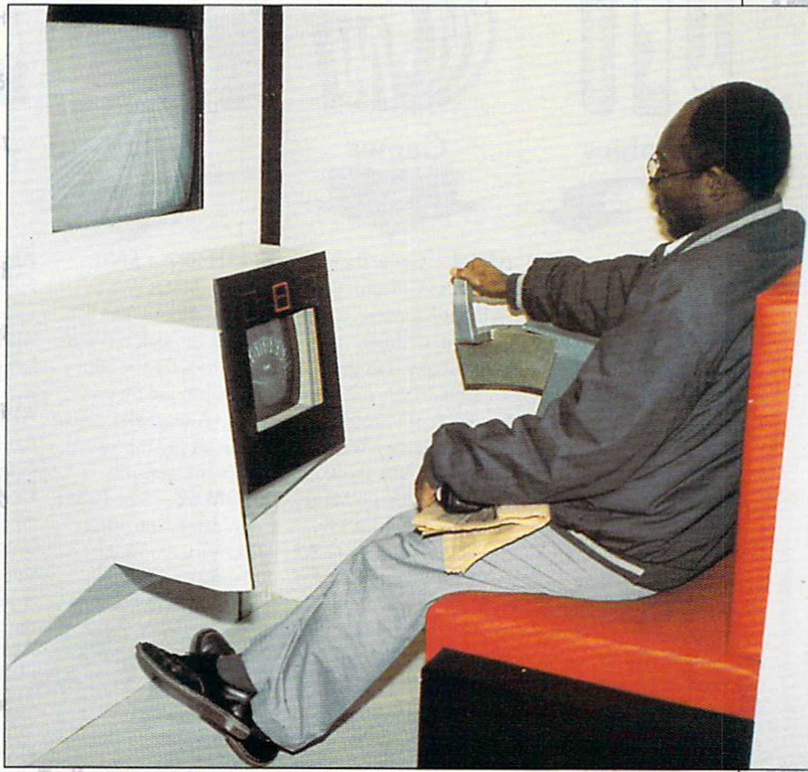
The arm itself was quite easy to read, simply taking the optical driver output and patching it into the parallel port of a 2000. The cab window display is then driven in the same way as before, but there is a another output.

In the 1990 train drivers are aided by an illuminated odometer, which not only indicates their current speed but also has a row of lights showing the "correct speed". By matching both sets of lights they know they are not going too fast (unlikely in my experience) or too slow. In the

simulator this extra display was driven by an A500, getting its data from the 2000 via the serial port.

The animation frames for the cab display would have taken a theoretical 8Mb of memory as conventional IFF anims, but the team working on the project, Aeon Design, put to work their obvious programming talent to squash it into one meg.

The technique involved storing a number of repeatable backdrops and overlaying bobs (or Blitter-objects, the Amiga's software sprites) which are updated for each frame. Cunning frame-swapping provides the feeling of motion. The result is a rather smooth display which could easily be straight from DPaint but in an eighth of the space.



Getting to grips with the simulator, this guy's doing well. He has already assumed the posture and expression of an LRT driver. Perhaps the drivers of the future will be trained on equipment like this

DIGITISED sound effects accompany the simulation. In order to faithfully reproduce the underground atmosphere the sounds were recorded by dangling a microphone out of the cab window. To get the realistic speech effect Brian Van De Peer shouted at his Amiga from across the room!

Why do all this on the Amiga? The museum way of doing things usually runs along the lines of commissioning a model-maker to produce an exhibit, with twiddly-knob devices in glass cases to provide the interactive element. While these types of display are likely to remain in exhibitions into the distant future, the interactive computer approach is bound to have a major rôle to play.

Computerised displays are, basically, cheap and flexible. It is a lot easier to pay some highly intelligent chaps to write some software than it is to pay a craftsman for six months' work. And what happens at the end of the exhibition? Expensive models have to be stored somewhere – or worse still – broken up. A piece of hi-tech computer hardware can always be re-used in the next exhibition.

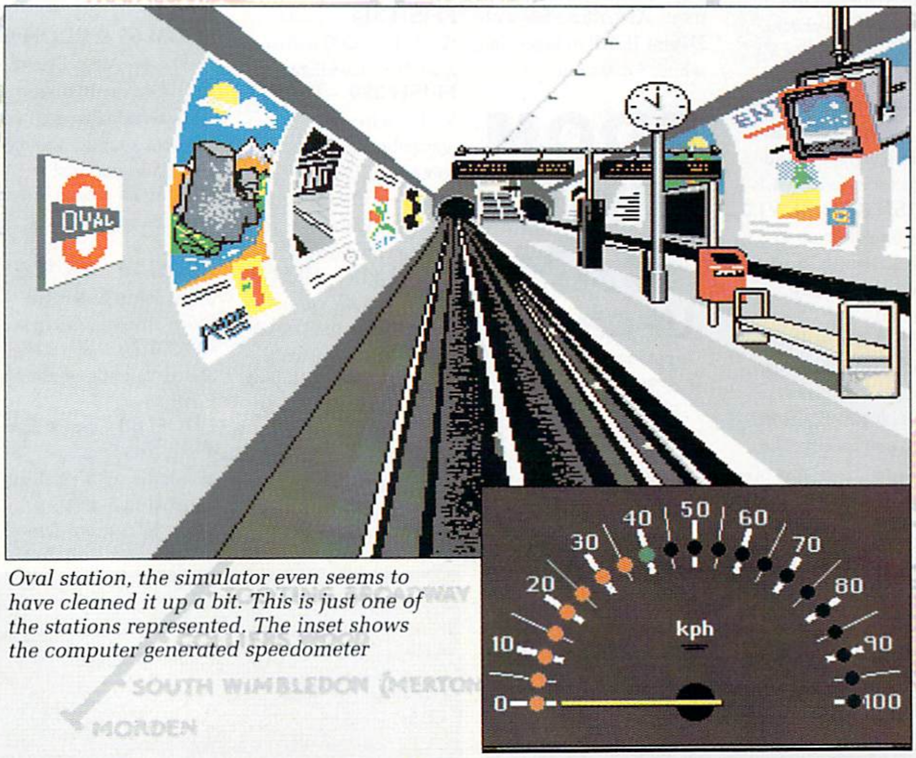
The basic requirements for this project were that the computer involved be flexible, reasonably cheap, easy to interface and have excellent graphic capability – basically the design spec of the Amiga.

An ST was originally considered but sense prevailed – as Rob Lansdown of the London Transport Museum says "it's a different kind of animal entirely".

The museum are so pleased with the the project (it has already being wrecked a few times – the sign of success for a museum exhibit) that they are already thinking ahead to the next exhibition, which may have even more Amiga-based displays.

Aeon Design is hoping to be in on that and perhaps catering to the needs of other museums as the century draws to a close.

The moral of the story? Your Amiga is a serious piece of gear easily capable of handling more tasks than you can possibly imagine – don't let it vegetate in the rôle of a games machine and above all don't underestimate it. In the meantime, your past is part of its future.

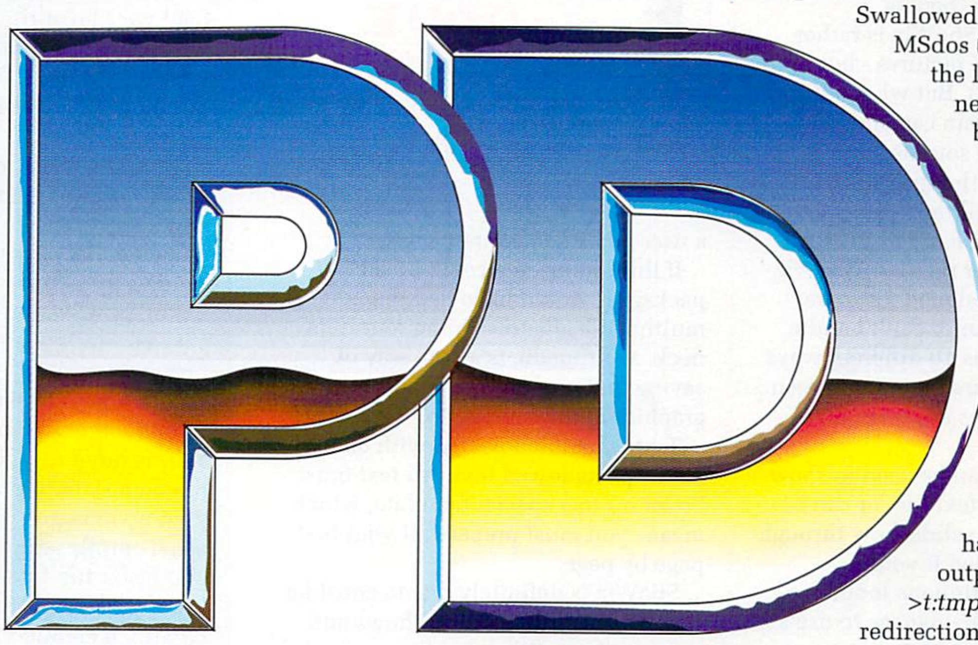


Oval station, the simulator even seems to have cleaned it up a bit. This is just one of the stations represented. The inset shows the computer generated speedometer

Stewart C. Russell demonstrates how to rebuild your Amiga from scratch using the multitude of available public domain utilities

EVERYONE has run into a part of ARP (AmigaDos Resource Project) at one time or another, that I can guarantee. The near standard file requester was done by the ARP head man Charlie Heath.

For most people, that's as much of ARP as they'll see. There's more than just a file requester, though – there's a complete replacement for Commodore's commands, plus an improved Shell environment contained in the ARP Release 1.3 Install program. And all of this lives on TBAG Disk #31.



Why would anyone in their right mind want to replace Commodore's commands ? They work, do they not ? Well, no and yes. They're written in C, which makes them bigger and slower than ARP's assembly language ones.

The Commodore commands also don't quite work as they should. ARP on the other hand, is very well behaved. ARP commands usually have more options and better Help facilities than the supplied command set.

IF ALL this seems rather dull, you might appreciate the fact that installing ARP gives you much more room (over 60k) on your boot disk than before. This is partly due to the smaller size of the assembly code, and also due to ARP's use of a shared library.

This shared library, called *arp.library*, contains mostly housekeeping routines. It also contains the much-used file requestor, used by more programs than it would be wise to shake a stick at. OK, so it's not 100 per cent big or clever to shake sticks at any kind of software, but at least it breaks the tedium.

ARP's shell, Ash, is more intelligent and more compact than Commodore's offering. It has most of the script control commands – like If, Else, Endif and Execute – built in, so your scripts run far more quickly.

Ash supports environment variables properly, unlike Commodore's, which still uses an awful kludge to work properly. Additional commands have been added to the c: directory to give you parsed input of variables. Gone are the days of the simple yes/no question.

If you've used proper Shells before, you'll be wanting to use pipes, command substitution, and I/O redirection. Maybe "wanting" is too strong a term, but "able to find a use for" was just too long.

Ash allows you to use all of these, but you need to get another piece of software to do the first two. ConMan v1.3 on Fish Disk #165 (Shareware, $10) is what you need, since it implements a proper pipe.

SO WHAT is a pipe, and what use is it ? All a pipe does is collect output from one program, and feed it as input to another. A simple example is "List | Type OPT N" (the | being the pipe) – this creates a numbered listing of the current directory.

Command substitution isn't as useful as a pipe, but it's fun to be with anyway. It can be used to substitute the output from a command into the output from another command.

Swallowed that ? Good.

MSdos (a Dos which has the latter quality of its near-homophonic bleach) isn't the only one which can have the date in the prompt - *Prompt "*$(Date)"* gives you the same from Ash. That's what a command substitute is.

AmigaDos has always had output redirection *dir >t:tmp* and input redirection *type >t:tmp* but what if you wanted to append output to a file ? You'd have to redirect to another file, and then join two files together.

Ash has append redirection (using >>) which, surprisingly, appends the output on to an existing file. If the file doesn't exist, it gets created – no nasty late-night meetings with Mr. File-Not-Found!

Apart from being a file requester, a set of commands, a Shell and a way of life, ARP is also a software development philosophy (woo!). ARP is a cooperative effort to provide enhanced commands and to provide a better user interface through the *arp.library*.

The work is fully documented, and has been made available to Commodore for use in future releases of AmigaDos.

Commodore now supports ARP (in the US, at least) and most of it is included in AmigaDos 2.0. Yes, that means there will be a standard FILE selector in 2.0 ...

ARP may be used and distributed without charge. In the year or so that I've been using ARP 1.3, it has served me very well, with no bugs, crashes, or general weirdnesses. It's perfect.

➤

ShoWiz – not just another IFF reader...

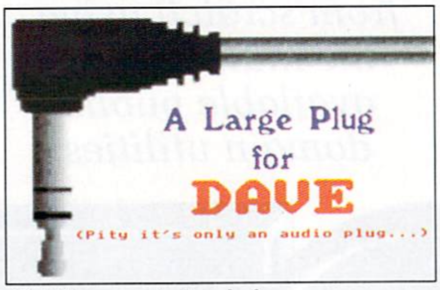
I CAN tell what you're thinking – Russell's gone and run out of interesting things to write about. Here he's going on about IFF picture readers, possibly the most common type of PD program there is.

OK, I admit that ShoWiz is rather good at reading IFF pictures - but then so is Deluxe Paint 3. But what other picture show program can show text files, play sampled sounds, use requesters or run other programs?

ShoWiz can do all this (plus the customary *and much more*) in only 23k. It has a smaller relation, ShoWiz Junior, which is designed for more limited work, as Junior can't handle scripts and only has 10 different ways of wiping the picture on to the screen. The full ShoWiz has more than 20 different wipes.

Both programs can be used to show a single picture or text file, or can be given a directory to slideshow through in alphabetical order. If your slideshow is a continuous loop, ShoWiz will usually manage to use a different wipe for each picture.

It's ability to run external tasks was originally coded to allow animations to be played from the script. Any program can be run from ShoWiz: I used it to automate the installation of a user-hostile software package.



ShoWiz comes in handy for budding advertising executives

If this had been a commercial package it would have had the multimedia albatross hung round its neck. Multimedia is a cute way of saying that you get sound and graphics at the same time.

Text is handled neatly, with 80 by 25 drop-shadowed text. All text must be set up in a special template, which means you must prepare all your text page by page.

ShoWiz is definitely one to consider if you have to create slideshows and presentations. Whatever the purpose, from education to advertising, ShoWiz will show your best side.

ShoWiz v2.0 is on TBAG Disk 31, and has the very reasonable shareware fee of $10.

LIFE'S hard for the average Workbench user. I mean, people who use the Shell can create script files to automate repetitive tasks. Workbench forces you to do everything by hand.

Wouldn't it be good if you could load your favourite program, and for it to automatically set itself up the way you like it ? Well, for this sort of thing, Scripit on Fish Disk 288 is your program.

Intuition, the Amiga's graphical user interface, makes Scripit's task fairly simple. Every time you select a menu, click the mouse, or whatever, Intuition sends a message to the current program detailing what you've just done.

What Scripit can do is send these messages direct to your program without all that tedious mucking about with the mouse. To make writing scripts more straightforward, Scripit has an auxiliary program to record your actions in a plain text file. It can also compile scripts to a more compact and faster file format. This can save a lot of space with long scripts, since compiled commands are only a few bytes long.

Scripit is much more than just a mouse recorder. It's a mouse organ too; a complete language in itself. It has

Jazz up your Workbench

WORKBENCH can seem a little creaky at times. Well, OK, very creaky. The waiting involved when all the icons are being read from disk or when files are being copied is very tedious.

Workbench annoyed David Navas so much that he wrote a replacement. Instead of just getting rid of the annoying delays, he produced what he thought Workbench should have looked like all along – a sort of concept front-end, as it were.

Jazzbench isn't actually complete in the version that's available. It's rather buggy too, and prone to crashing. It really needs a megabyte to run properly. So why do I mention it ?

Well, Jazzbench actually does a better job of supporting the Intuition graphics system than does Workbench. Jazzbench window contents scroll smoothly when a slider gadget is moved: Workbench only moves the icons once the gadget has stopped. Windows also have tiny icon gadgets on them, which allow windows to be kept on the screen without taking up useful space.

Workbench's unused device icons are implemented – if you have an icon for your printer, dragging a text file over it will print the file. Unfortunately, Jazzbench currently opens an icon for every device mounted (including CON: and RAW:), so you'll find your screen littered with useless icons.

If you're working on files without icons, Jazzbench can display them either by listing them, or by creating temporary icon files. It doesn't mean, though, that CLI-only programs suddenly become Workbench aware.

The annoying warning screen flash has been patched to play a sampled sound. The default is HAL's "I'm sorry Dave, I'm afraid I can't do that" from 2001. Also patched is the Workbench screen backdrop, to give a very simple pattern, and the window close routine, which looks a little Mac-esque.

In common with Mac Finder's DAs, and ST GEM's ACCs, Jazzbench supports desktop accessory programs. These are generally small programs like a calculator which it's handy to keep loaded for instant access. This is more useful under a non-multitasking front end (like Finder and Gem) but is handy to have anyway.

Jazzbench promises more features in later releases, such as automatic display of IFF pictures. With a bit more work it could become a Workbench 2.0 clone for ordinary

The mechanical mouse organ



Graphics on the Workbench? 'Ere, that's a bit clever

string and integer variables and flow control (IF...THEN...ELSE, GOTO, GOSUB, WHILE). Control can be passed to new scripts with the SCRIPT command, and the SUBSCRIPT command acts like a GOSUB between files.

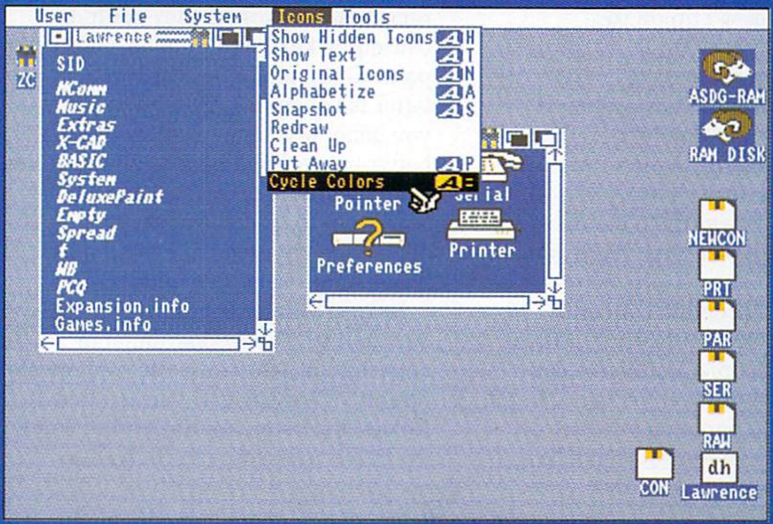
You want graphics commands? You got them – circles, points, lines, ellipses, boxes, filled rectangles, text – the kitchen sink's in there somewhere. There's also a command which will draw directly onto Deluxe Paint's screen.

The syntax of the Scripit language is similar to ARexx, so it's no surprise that Scripit has full ARexx support. So even programs which don't support ARexx can now be controlled by it.

For something as stunningly clever as Scripit you'd expect quite a hefty shareware fee. You'd expect wrongly then – Khalid Aldoseri has released the package as freeware.

Amigas. That's assuming that the promised development work is carried out.

As it stands on Fish Disk 228, Jazzbench is extremely difficult to install. If you thought MessyDos was difficult to install you don't know you're born, believe me. Quite a few PD libraries have a properly set up Jazzbench boot disk, which saves time, money, and swearing. Ask around – it's generally the smaller libraries that extend this kind of service.



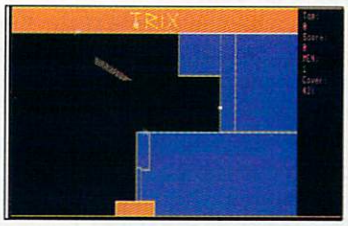
Window icons and icons left to their own (logical) devices

GAME OF THE MONTH

Trix

IF YOU frequent the arcades you will probably find a Qix machine hidden in a dark corner. Qix is a very old and simple game, which won a small but dedicated band of followers in the early 80's. Trix is Qix, basically.

All you have to do in Trix is to corral a randomly-moving line segment in less than 40 per cent of the screen area. The player is a small and rather unexciting blob which travels along the edges of the screen.



You create solid areas of colour which the Trix cannot enter. The Trix and its attendant Foos (or Sparx in the original) lose you a life if they touch you. What else did you expect? Free artichokes?

Trix is pretty much identical to the original – there's a definite look-and-feel case in there somewhere. Most of the minimalist addictiveness has been retained. So has the annoying drone of the Qix, erm, Trix.

Good, solid, reliable, non-violent, non-sexist simple fun. Not the sort of game I'd play all the time, but a couple of games every day should be enough for a year or so.

Trix is on SACC Disk 23. The ultra-sparse documentation mentions nothing about money, so I guess it has to be freeware.

Snap, crackle and plop!

COMPUTERS are supposed to make paper obsolete. So why is it that every computer desk in the known universe has a wad of scribblings covering every spare inch of surface?

The annoying things about said scribblings is that most of them have appeared on the screen have been noted down, and must be retyped later. Why can't you just pick the text off the screen and let the computer retype it for you?

That's what the people at the Xerox Palo Alto Research Center (it's in the States, hence the spelling) thought. They designed a system where text could be "clipped" from the screen and then retyped at the press of a mouse button.

The Amiga does have a Clipboard, but precious few programs make good use of it. Mikael Karlsson's Snap v1.4 uses the Amiga Clipboard and the original ideas from Xerox to make a Wonderfully Useful Program.

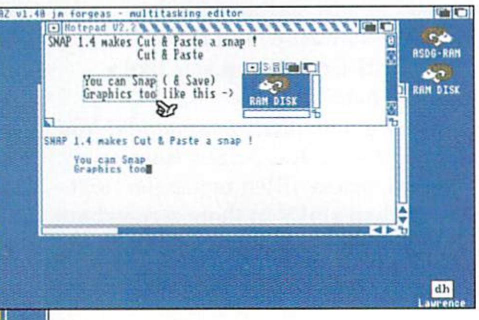
Dunno about you, but for me a Wonderfully Useful Program is one which has found a place in my Startup-Sequence the first time I see it. Not merely does Snap save all the hassle of writing things down, it can also clip graphics from any screen.

The text clipping has a few limitations. It can only clip text that is fixed width (non-proportional) of less than 16 pixels height. Considering that all system text currently conforms with this, that's not so bad.

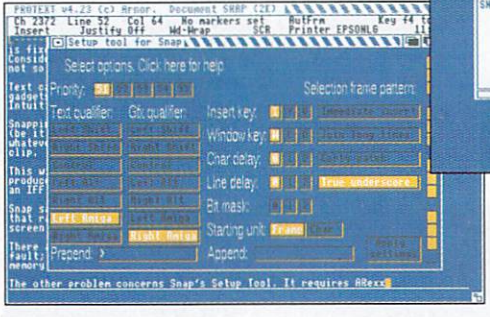
Text can be clipped from anywhere - window title bars, icon names, gadgets, wherever. As long as the text font is the same as the Intuition Screen font (which it usually is) you'll be able to clip it.

Snapping graphics is really neat. You can clip an area of any screen (be it HAM, half bright , interlaced, 2 to 32 colours, overscan or whatever) and a window opens on the Workbench screen containing your clip.

This window has a little icon in the title bar. Clicking on it produces a Save gadget, which allows you to save the graphics clip as an IFF file.



Snap by name, Snap by nature



Configure Snap the ARexx way

Snap saves all the correct system information along with the clip, so that rather messy clip on the Workbench screen which was from a HAM screen regains its former beauty.

There are three minor problems concerning Snap. The first is Commodore's fault; some versions of the *clipboard.device* have a bug which causes a little memory to be lost every time it is used. Not fatal, but it can be annoying.

The second problem concerns Snap's Setup Tool. It requires ARexx, which most people don't have. It's possible to set up Snap by hand, but it requires much perusing of documentation and head scratching.

The last problem is neither Commodore's nor Mikael Karlsson's. Some programs will not accept input as quickly as Snap can provide it.

Other programs strip out very rapid repeat keystrokes, as they could be caused by keyboard bounce. QED (PDs passim) is a major culprit where the latter is concerned. This means that you generally have to set the delay between sending characters to be quite large – around 20 milliseconds. That works out to be just under 50 characters per second, which is still many times faster than I can type.

Snap is wonderful, is on Fish Disk 326, and is "Freely distributable copyrighted software with a shareware option". That basically means that Mikael Karlsson wouldn't mind some dosh, but isn't going to get heavy about it.

Bing, bong – Amiga calling

WHEN your Amiga wishes to warn you about something, it flashes the screen rather than sounding the more usual beep. This is due to the slight possibility of another task using the audio device and not allowing the beep. Whatever the reason, if you happen to blink, you've missed your warning.

Even worse, if a program decides to send out a rapid string of warning flashes, the screen goes wild. Even just thinking about it gives me a headache that will require a few hours' kip to recover from.

It is here that InstallBeep comes to the rescue. What it does is intercept the system's screen flash and re-route it to a little IFF sound playing routine.

As you can choose your own sound file, you can personalise the way your Amiga behaves. I have my own machine set to warble like a loon, which just happens to be Minnesota's state bird, and a terrific non-sequitur into the bargain.

InstallBeep plays the sound asynchronously, so your program won't have to wait for the sound to finish. Better still, multiple beeps just fill up spare audio channels to give a stereo echo.

InstallBeep is very small, but it has to install the sound driver and the sound file in chip ram. For that reason I wouldn't recommend it to folks who spend all day drawing pictures in overscan interlace HAM. For the rest of us it gives us one of the neater features from David Navas' JazzBench without the hassle.

InstallBeep by Don Withey and Tim Friest is on Fish Disk 217, and is freeware.

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HOW TO DTP

Continuing his investigation into this thing known as DTP, Nic Veitch confirms that the eyes have it

IT was, I believe, Bismark who said that politics is the art of the possible. Well, that may be, but I believe that publishing is the art of the possible. There is more to that analogy than meets the eye, but it is to the eye we go first, as we discuss artwork.

Very few, and here I shall add the qualifying adjective "successful" publications carry on without some vague interspertions of a more nobler form of art – an illustration, a photo, even a cartoon.

The reason for this is quite simple. No matter how brilliant the text is, no matter how fervently you worship the great god Univers, people's eyes can only have so much of a good thing.

Ever wondered why you can read a newspaper right through and yet you've been reading "Zen and the Art of Motorcycle Maintenance" for three years? Now you know – eyes are fickle things. They just like everything nice, and don't want to do any work. They are slackers.

So, everyone has lazy eyes, what are we going to do about it? Well, it's no good beating them, we have to coax them into work. Basically fill the page with stuff that they just can't help themselves from looking at, the equivalent of a "Free Bird Seed" sign in a Roadrunner cartoon.

Track'em, trick'em and trap'em.

Some things eyes just find irresistable, like more eyes for example – that's why pictures of people are so good, that's why racks full of magazines have a portrait on the cover. There are more and more ways of leading the eye, but just as important as sending it off in the right direction is having an oasis of art somewhere in the desert of text.

Eyesavers don't have to be just artwork, they can be text too – or rather text can be artwork too. This is

Drop shadows

DROP shadows are another attention-seeking device for use on artwork or text. They lends a kind of three-dimensional effect to the artwork, giving the page more apparent depth.

They can also be used very effectively with text and other types of illustration. Pie charts are improved greatly by a drop shadow as it lends more substance to the quantities being compared.

The one important thing to remember about drop shadows is not to overuse them (otherwise everything looks like it's floating away) and try to get them equal. Most importantly the shadows lie in the same direction (unless you are trying for some weird effect) otherwise the page just looks wrong, often without the reader realising the cause.

Photographs



PHOTOGRAPHS are reality – well, more or less. As such, they bear close examination. You want to make sure above all else that they are communicating the reality of that you are putting forward in the text. It's no good doing a report of a show claiming big business, overcrowding and crush victims alongside a snap showing only a few people milling around.

Remember people's faces are eye-catching, as is the way they are facing. Much can be made of the fact that they are facing away from or towards a particular block of text.

Remember, if there is no text in the background it is generally considered quite all right to reverse the photograph so that objects are facing in the direction you want them to.

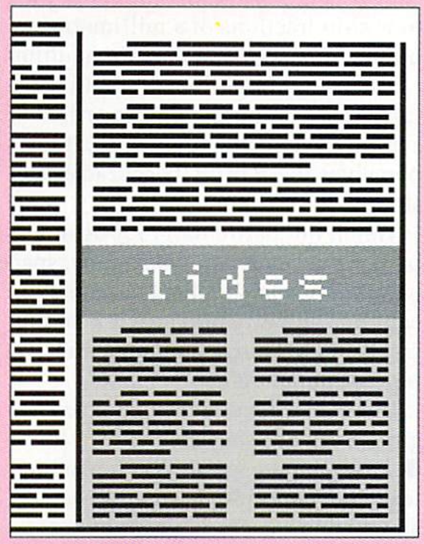
This ploy requires care, as hair partings, double breasted jacket lapels, wristwatches can give the game away. And with cars some smartalec will always be quick to inform you that a particular model isn't available in left-hand drive...

Tints

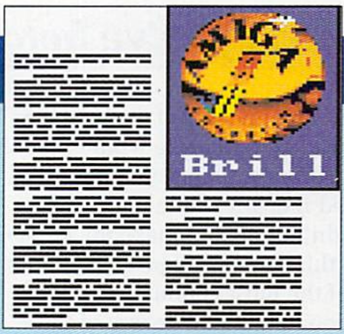
HEADINGS or important paragraphs of the text can be emphasised by running them against a light grey (or coloured if you've broken the mono barrier) background. This is known as a "tint" or a "screen".

This technique can equally well be applied to complete boxes of text. It is most effective when drawing attention to sidebars – small, self contained articles which are in some way related to the main topic of the body text.

Don't get too carried away – always check to make sure that there is enough contrast between the text and the background to make it clearly legible. Also check the typeface – serifed typefaces are easily lost if the background is a grainy mono colour.



Bleeds



A BLEED is where a piece of artwork, illustration or even just a block of colour extending to one of the physical boundaries of the page.

A powerful effect is caused by some nice artwork "breaking out" of the apparent confines of the page margins. The artwork actually overwhelms the space and becomes the physical boundary itself.

It is important to note if you are working at home that many printers will not allow you to print to the very edge of the page. The worst protagonists of this anti-DTP style behaviour are laser printers. The HP laserjet in particular requires that you leave a substantial amount of space around the edges,which makes it a bit difficult to do bleeds unless you photo-reproduce them on later. Watch out for this.

Colour

ADDING colour to your publication needn't be expensive – don't think you're going to have to start outputting on four colour films. It can be easy as just printing on different paper.

Various papers suitable for this purpose are available from most good stationery shops. They are a cheap way of brightening up a dull and monotonous black and white publication.

Always remember to check that your ink colour will stand out against this background – it may be an interesting way to torture your enemies by slowly blinding them, but not very sound financially.

You may not have to go completely colour to brighten up your pages. Just one extra colour, used for keylines, drop shadows or tints, can really make a difference. Blocks of colour can be used as a background for a page full of boxes.

Remember that the text can go in a different colour, too.



Even the use of just one colour can have a dramatic effect. This page is totally made up from black, red and the shades that these give you

achieved in a rather simple fashion by adding tints, reverses, stretching and/or compressing both horizontally and vertically, boxing out, using colour. Basically, the art of possibility.

Photographs and illustrations cannot just be pasted on wherever a convenient break in the text evolves, but must be planned out. They contribute to not only the colour, style and "emotional tone" of the page, but also it's legibility. Remember that eyes can be directed away as well as towards...

Artwork must follow the same rules of hierarchy as headlines when it comes to size – the more important, the bigger they go generally. There's no point having a minor decorative piece of artwork bigger than some important photo or diagram, no matter how much prettier it is.

The page is a battleground. You must make sure that the correct amount of authority goes to the correct part of the page, otherwise the reader is given the impression of conflict and confusion, not to mention the psychological distress it causes anyone who *does* know anything about DTP.

Photographs are funny things. It is said that a picture is worth a thousand words. This may well be true, but in the case of photographs at least half of them are irrelevant and, like other irrelevancies in the text, must be stamped out ruthlessly.

However, be careful when you are ruthlessly stamping. There comes a point when information as well as irrelevancy is being lost. How much information to lose is very much a personal matter, but just be gentle OK, the old iron foot in a velvet sock or whatever.

Cropping a shot shouldn't be as a

➤

Spock, you've botched it!

CATALOGUING all of the mistakes you are likely to make would take the *Amiga Computing* team of highly trained monkeys so long that they wouldn't be able to make my coffee, so in this section I'll just point out a few of the most common mistakes.

If you haven't made any of these mistakes then I salute you. You are obviously a born practitioner of the art – or too stubborn to admit you are wrong. If you have...well, at least it's one less mistake you're going to make in the future

● Underlining: Oh dear – you've gone and underlined a whole paragraph or something haven't you. Excessive underlining is probably one of the nastiest things you can do to eyes. If the text follows for more than one line this problem is compounded.

The eyes are torn between focussing on the actual words and the solid line beneath them. If this wasn't bad enough, descenders from some letters will be lost in the line, making words hard to identify. Like most emphasis tools, use underlining sparingly.

<ins>There is a tendency in reports and other such documents to underline entire paragraphs of text by way of emphasis. This should be discouraged as although the function of drawing attention to the text is fulfilled, at the same time it becomes quite unreadable.</ins>

Compared that is, to normal text which has just a few <ins>key words</ins> highlighted. The eyes are drawn automatically to the really important words because they are the only ones higlighted

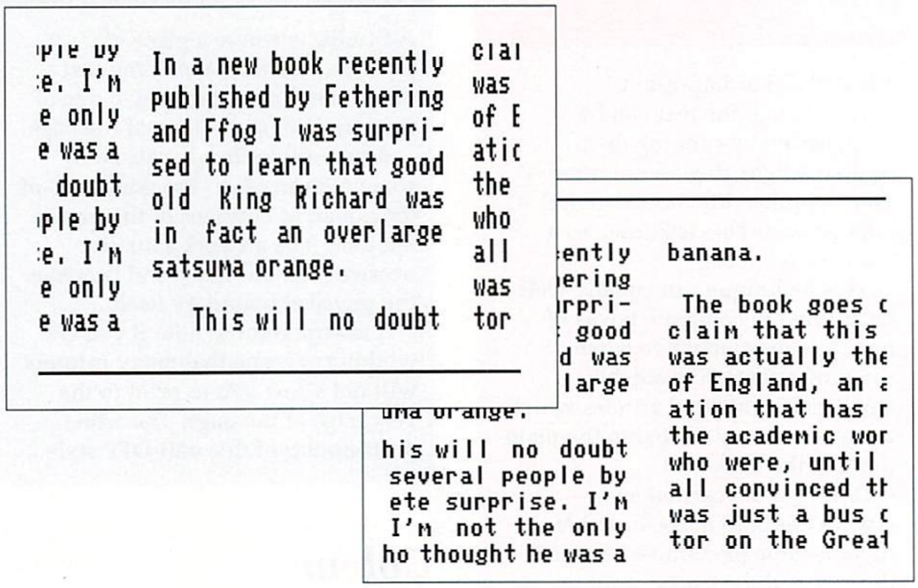
● Angles: Type set at an angle may be fine for thin strips across an article or "teasers" on the cover, but generally they should be kept as short as possible.

Setting the text at an angle forces the reader to slow down to take it in. This is great for things like teasers, since the object is to draw attention to them and get the message through (which is achieved by the reader spending more time on it, and thus becoming more aware of each word).

Over long passages it soon becomes to irritating to read and the slow progress only heightens boredom. That is why teasers should be brief and every word chosen with care.

● Widows and orphans – solitary words at the foot of a column, or the top of one: It is not a crime to leave copy full of widows and orphans...but it should be. The thing about them is that they look so awful, but the remedy is so easy. Simply add or delete a few words in the rest of the text.

In fact even breaking a paragraph will affect a cure – you don't even have to tax your brain as to which words to delete or which words to add, just press Return at the appropriate point.



● Unequal spacing: Oh you wicked,wicked person. The human eye is incredibly perceptive to variations in spacing. I knew a man once who could accurately adjust his spark plug to within fractions of a millimetre purely by eye – it's not unusual either.

The thing about this is, what with the human brain striving for order, symmetry and above all sense, it just perceives these little inaccuracies as sloppy work.

Watch out particularly for distances between headers and body copy, space between headers and side borders, captions and artwork, artwork and copy, and of course, columns and top/bottom margins.

It is also a dead giveaway if your gutters are not consistent.

● Exaggerated space: When placing text, tabs and indents should be adjusted to remain in proportion to type size and column width. Nothing looks quite so unsightly as vast tracts of virgin paper wastefully squandered.

➤

negative thing though. In effect you are not really losing anything at all. The primary purpose of the photograph is to *convey* information. If that function is better served then you have only gained, not lost. What the public never saw, they won't miss and may be happier for it.

Obviously, cropping a shot can help it fit in better with the relevant copy. If you are running a feature on "the loneliness of the long-distance runner" then you want to make quite sure you crop any other persons out of the shot.

Similarly, if you are doing a feature on the thankless wretched torment of being a well-renowned journalist you may want to come in tight on the subject with his head in his hands – thoughtfully leaving out the information that his elbows are supported by a table containing 30 pints of Boddingtons and a few of his inebriated acquaintances.

Now, no matter how brilliant I have been so far, some of you are bound to have botched it. Well, I can't say I'm surprised really. I mean – it stands to reason. DTP is a bit like cooking – with practice you can produce almost anything, but how quickly you progress and how high the standard you eventually achieve is down to natural talent. On the other hand, at its basic level, almost everyone can do it (otherwise they'd starve to death).

The one thing that you must always remember is communication. It's not enough for the information just to be there, it has to be communicated –

Silhouettes



ONE way of emphasising the important information contained in a photograph is by silhouetting it. This means masking out all the irrelevant background detail so that only the primary subject is left.

One of the effects, in addition to the normal advantages of cropping, is that the shape of the artwork is completely changed – you are no longer restricted to a square or rectangular shape.

If, as in some cases, this is a disadvantage then the resulting silhouette can always be put in a box, with a background tint if necessary.

Nothing that is except for...

- Ransom notes: Oh dear. You are the worst, and most common, criminal. Why did you do it? Hmm...just couldn't resist all those nice fonts, could you

The biggest single mistake most people make is to use too many typestyles, weights and faces on a single page. The result tends to look like several species of alphabeti-spaghetti mixed into one – and is about as appetising.

Basically it results in an amateurish, disorganised appearance. You must restrain yourself. Try keeping one face in one style to do a particular job. They can even double up sometimes. Use the minimum number of faces and sizes to establish the hierarchy of the text and leave it at that.

More of your best blunders next time

If you are going to use so many different fonts on a page why not go the whole hog and DTP a ransom note?

Remember: Less is more

that's the difference between reading through a symphony and hearing it played. Remember that.

News-sheets are in a bit of a different boat since very few editors actually consider that everyone is going to want to read right through the complete paper. Therefore a choice of what to read has to be made and it is part of the designer's job to make that choice easier.

Most common mistakes boil down to the use of flash gimmicks. Remember the age-old guideline, laid down by the first Thane of Amiga Computing, "less is more". Don't get carried away – art for arts sake is a waste of space.

Remember, above all, people have to read it – try making it easier for them rather than harder. A confusion of different sizes and styles is only going to make people hate you. Try and work out different styles and sizes for different purposes, then stick to them. Consistency doesn't have to mean boredom.

Glossary

CROPPING: The technique by which irrelevant or unwanted material is removed from a photograph or illustration. This used to involve a ruler, a scalpel and a keen eye, but nowadays is handled by almost all DTP systems.

GUTTER: the space between two adjacent columns or, more properly, the space between the copy and the bound edge of the page.

ORPHAN: A single word or partial line of text that has wrapped around to come at the top of a column. An unsightly blemish on the face of your work – get rid of it.

REVERSE: or WOB (White on Black). This is where the ink colour and background colour are, funnily enough, reversed. A useful effect, especially if the output is only black and white.

SCREEN: another term for a tint. A tint which has 30 lines per inch (lpi) is known as a 30 line screen.

SIDEBAR: This is a term used to describe a small (compared to the main feature) item of text which is related to the main text through its subject matter. Sidebars are usually tinted or boxed-out in a magazine.

TEASER: A small strip of concise text, placed in a prominent position (usually on the cover) with the primary objective of enticing the reader and instilling the desire to learn more.

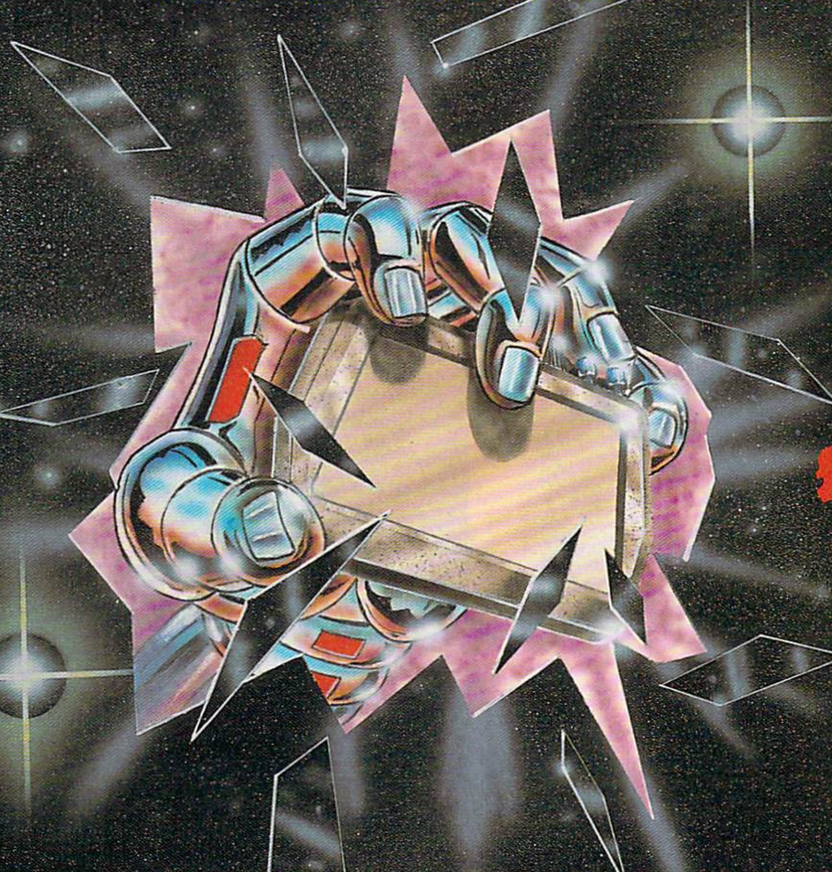
TINT: A shade or halftone which replaces a solid block of colour (for example in reverses or drop shadows). Particularly useful in mono work. Also see screen.

WIDOW: Similar in unsightliness to an orphan, however this time it is a word or fraction of a line which appears isolated at the bottom of a column or paragraph. The amount of white space left draws attention to these blemishes.

ZEN: A popular religion which actually has not very much to do with fixing a motorbike – and come to think of it, is of even less relevance to DTP

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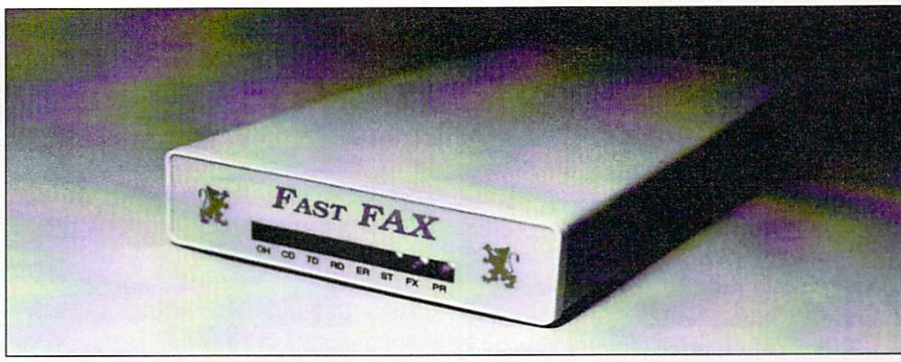
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The fax of life

Fax machines aren't just tools of rich businessmen and the toys of yuppies – you too can send and receive faxes using your Amiga. Jason Holborn doesn't let the fax get in the way of a good story

FAX machines are wonderful things. You can use one to send an almost exact duplicate of a document to someone who could well be thousands of miles away, get them to sign it (or whatever) and then fax it straight back to you – all within a matter of minutes.

It's enough to make you wonder why people ever bother using the great British postal service at all.

If fax machines are so wonderful, you're probably asking yourself why everyone doesn't have one sat snuggly next to that other great communicating device, the telephone.

The answer is simple – the price. Even the cheapest fax machine will set you back at least £500, but don't expect it to feature all the latest bells and whistles.

For that kind of money, you're probably looking at a fax that will only handle single pages and send them to a single destination.

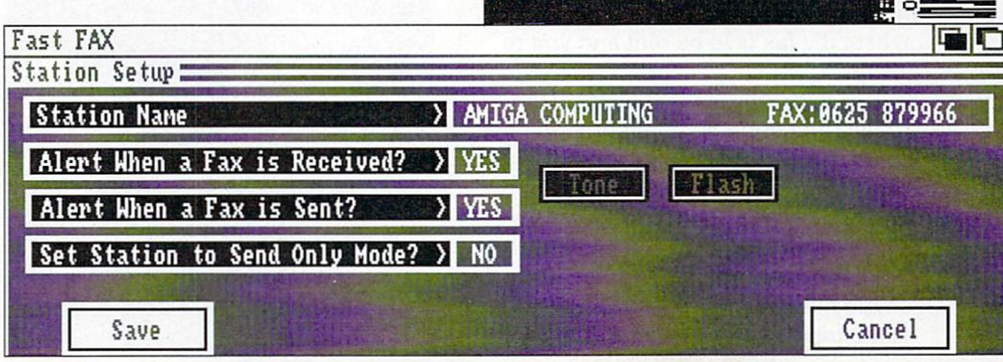
These days, a fax machine with that kind of specification is practically prehistoric. Modern faxes can handle multi-page documents, process images with up to 16 grey scales and even transmit to multiple destinations at pre-programmed times, but that kind of power costs money. Expect to pay around the £1500-2000 mark for a fax with that kind of spec.

Fax machines can also be incredibly complicated beasties – all those buttons to press is just too much for most mere mortals. Anyway, if you're anything like me – I still haven't worked out how to program my video recorder – you'll break out in a cold

➤



As you can see from this screenshot, the quality of faxes are very high indeed



Just like a real fax, Fast Fax can be set up to print your company name at the top of every page sent

➤

sweat if there's more than two buttons on the front panel. Why do such devices have to be so damned complicated?

NOW, thanks to Microdeal, there is an alternative which offers the power of a top flight fax machine for a budget price. To save idiots like myself from having to press loads of buttons, it is even controlled by the most friendly computer available – your Amiga.

Microdeal's Fast Fax consists of a fairly small box – about the size of your average modem – which connects to the serial port of your Amiga.

Externally it looks pretty dull – just a couple of non-BT phone sockets at the back and a row of LEDs adorning the front.

As Fast Fax is hardware based, it is not possible for it to send printed documents in the same manner as a conventional machine.

Instead, the Fast Fax software will allow you to send either standard Ascii text files – such as those produced by most word processors – Epson printer files, a fax that it has previously received and stored, and an ASCII file containing its own special "dot commands".

Although there is no direct support for sending IFF pictures as faxes – which is a strange omission – the program disk includes a wondrous little utility that will convert all your IFF art to a suitable format for transmission.

Why Microdeal didn't include direct support for IFF files within the main program, I'll never know.

DOT commands are the secret to the power of the Fast Fax system. When you're sending a document such as an official letter to someone, you'll no doubt want to include such things as letter heads and even your own signature.

Fast Fax gets around the limitations of being computer-based with the help of its powerful dot commands. These are inserted at the start of an ASCII document and basically tell the Fast Fax to pull in and send either a cover page, letter head, signature or a text file.

Signatures could easily be scanned in using a video digitiser and then converted using the included file conversion software mentioned above.

Just like a real fax, Fast Fax also has the option to place both your name (and the name of your business) and your fax phone number at the top of every page.

To receive a fax it is necessary to switch the software into sleep mode. Fast Fax will now happily receive any incoming traffic and then automatically save it to disk for viewing later.

Once recalled, you can use the built in view facility to either save the fax as a separate IFF compatible file or print it out using any preference-supported printer.

Not surprisingly, faxes cannot be saved in ASCII format – if you want to edit the text from a received fax within a word processor, you'll have to either retype the lot from scratch or, for the adventurous among you, use some kind of OCR (Optical Character Recognition) software to read the fax once it has been saved in IFF format.

To save you having to look up fax numbers every time you wish to send a fax, the Fast Fax software provides space for up to 1000 commonly used fax numbers to be defined within its built-in phone book. Sending a fax is now simply a matter of selecting where the fax is to be sent and you're away.

The software also includes powerful scheduling options. When used in combination with the phone book, it is possible to send a preset list of files to a particular location (or locations) at a pre-programmed time. Multiple files may be sent to a single location or a single file to multiple locations – such is the power of Fast Fax.

Fast Fax certainly isn't perfect, but for the price it just blows away dedicated fax machines. However, unless you feel you really need a fax, Fast Fax could easily become an unused luxury – how many people do you know who also have Fax machines?.

For those who are considering buying a dedicated Fax machine, Fast Fax could well be what they've been looking for – it is well designed, powerful, and is certainly the easiest to use fax machine I've ever come across.

Specific fax

The heart of the Fast Fax hardware is a dedicated 68000 processor (just like the one inside your Amiga) with 32k of RAM and 64k of ROM.

For those of you who know about such things, the Fast Fax hardware is compatible with a CCITT Group III fax and offers V29 (9600bps, 7200bps), V27 (4800bps, 2400bps) and V21 (300bps) transfer rates.

Surprisingly, although fax machines are really nothing more than glorified modems, Fast Fax can only be used as a fax – it surely wouldn't have cost Microdeal too much to add the extra circuitry to allow fast fax to also be used as a modem. Such an addition would have made the product ever better value (are you listening, Microdeal?).

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FEATURES.........
A more integrated phone book would have been nice, but otherwise the Fast Fax software is stocked with features.

MANUAL...........
Very well written, includes sections on all aspects of both the hardware and software. For quick reference, it even includes an index!

VALUE FOR MONEY..............
£700 may seem like a lot of money, but when compared to dedicated Fax machines, Fast Fax is a steal.

OVERALL 85%

Would have been nice if you could also use the Fast Fax hardware as a modem, but apart from this, Fast Fax gets the thumbs up.

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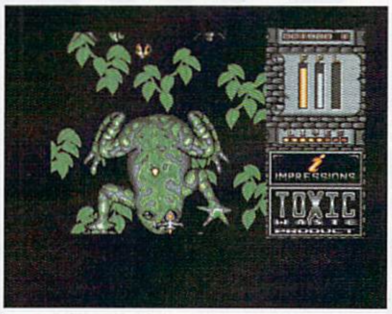
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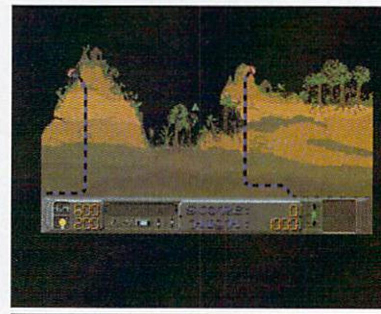
TRAINED ASSASSIN

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This blockbuster combines the best features of some of the most popular games ever to have appeared on the Amiga.

It features five action-packed levels with different varieties of scrolling and gameplay, with the fifth level guaranteed to raise your joystick's temperature by a few degrees (if not your own).

"Trained Assassin is of a standard that could probably survive unaltered in a real arcade – few games could manage that". – **Stewart Russel, *Amiga Computing.***



RAIDER

RRP £24.95

Skill and determination are the qualities you'll need in vast amounts if you're going to fully master this game.

Your mission consists of collecting pods by hovering above them and switching on your tractor beam, but all the time you have to take into account the effects of inertia and gravity, controlling your ship as smoothly as possible – to avoid colliding with the planet below.

"The graphics are wonderfully drawn and smoothly scrolled in all directions. Every landscape is a joy to look at and explore...delicate, addictive gameplay". – **John Kennedy, *Amiga Computing.***

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The CODE CLINIC

Programming your Amiga: Is it too complicated to even consider? What's the best way to start? John Kennedy checks out the language options, with only a slight bias towards his favourite

IF YOU remember, a couple of months ago I said the most common queries we received at *Amiga Computing* were requests for information on programming books.

These questions have now been superceeded by a new one: "I want to start programming my Amiga, but I don't know how to start. What language should I use?"

With hardware as sophisticated as the Amiga's, programming has come a long way from the good old 8-bit days. If you had a Spectrum, a CPC or a C64, chances are you knock up a game in a day or two.

The advent of the Amiga has laid bare the fact that computer languages have lagged behind advances in computer hardware to an incredible degree. The average user may feel so isolated from the programming environment that they may never write a single line of code.

This would be a great pity, because with only a little effort, the Amiga can produce some amazing results. However, somehow a feeling has developed that to program the Amiga you have to be American, Canadian or just slightly eccentric.

But let's get down to business, and have a look at the various tools available to help you start to make use of your hardware.

It ***is*** possible for you to start programming your computer, and it might not even cost you a penny thanks to the public domain.

On the level

THERE are many, many languages available to the programmer, each with their own strengths and weaknesses. By definition, there is nothing you can do with one language that can't be done by another. It's just that with some languages, certain things are a lot easier than others.

For example, you might swear by COBOL but I'd be very impressed if you could write the sequel to MiniBlast with it.

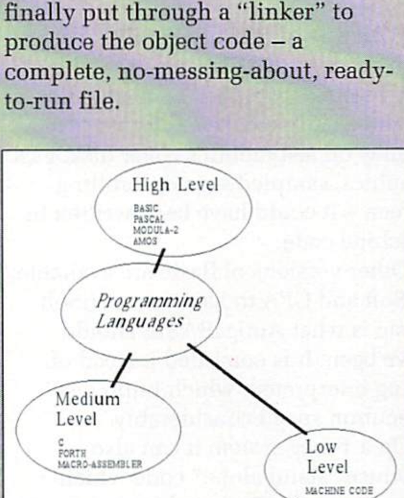
Languages are traditionally split into "levels". A low level language is fast and affords good access to hardware but is difficult to use. A high level language makes things easier for the programmer, but as a result runs more slowly and sometimes actively prevents access to the deeper recesses of the machine.

More jargon for you: Interpreters and Compilers. If a language is interpreted then a run-time module looks at and executes each line in turn. AmigaBASIC is an interpreted language. Yes, interpreted languages are a bit on the slow side at times.

Compiled languages get all the work done on them at the start, leaving a nice lump of code that will happily run on its own. C is a compiled language, and it runs quite fast.

Programming with compiled languages involves a number of steps. First the code must be entered with a text editor. This is the bit where some brains are needed and a knowledge of the language used comes in useful.

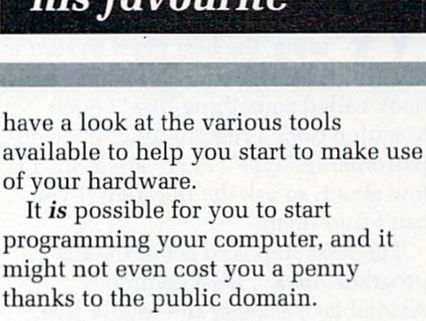
The next stages are sometimes incorporated by a clever "front end", but they still take place. The text file is compiled into a mixture of assembler mnemonics and references to any libraries used. Then the code is assembled, and finally put through a "linker" to produce the object code – a complete, no-messing-about, ready-to-run file.



Low level

MACHINE Code is the stuff of life itself. No serious arcade games programmer will touch anything else. You simply can't write a program which is any faster than a good machine code program.

Because you have complete freedom



The Motorola 68000 CPU internal register set

to do what you like, the computer becomes a very fragile system. Make one mistake and it's time to meet the Guru. If you program without using the operating system you'll be lucky to even to get this much information.

With 16 bit processors the complexity of the instruction sets have grown so much that for some people, much of the fun has been lost. Why bother spending sleepless nights developing a fantastic subroutine to handle division, when the 68000 has a divide ➤

routine built in?

For the newcomer, this works the other way. Programming the 68000 family is not quite as difficult as you might think. For a start you have many more registers than you would have on an 8-bit system, and each register is a whoppingly huge 32 bits long.

WHEN it comes to programming, the best place to start is with a trip down to the library to get a book called something like "68000 Machine Code Programming in a Non-patronising Style". There are quite a few about, so ask the librarian if you can't find them.

The next step is to get of the PD program *A68K*. . It's a complete Assembler package, and totally free. Can't say fairer than that. You'll also need a linker, such as the equally PD *blink*, to produce a piece of executable code.

With this package you can tinker about and have your very first DIY software failure.

If you don't have a nervous breakdown after writing your first machine code program, then you can think about getting serious about coding. Now you'll need to spend some money.

You'll need the books (see *Amiga Computing* July 1990 for information on the official manuals) and you'll also need a nice, friendly programming environment such as Devpac.

Pretty soon you'll be able to talk directly to the hardware registers and control sprites and set up scrolling bitplanes. After a while, you may realise that this way of coding is great for shoot-'em-ups, but a bit archaic for something half-way complicated. In fact, you may discover that the existing operating system wasn't so bad after all. Quite a few people spent quite a few man-hours developing the multitasking wimp system, so re-inventing the wheel yourself in an afternoon is a bit of a forlorn hope.

Aj's opinion: machine code on the Amiga is a lot easier than you might think. However, if you plan do anything other than a maga-fast blast-'em-up, you would do well to consider a language that does a bit more of the work for you.

Medium level

C is a strange language. Against all the odds it has become an industry standard. It's peculiar because it was originally written to be a "high level assembler" for a specific model of mini-computer.

At first glance it looks like a quick burst of line noise. On closer inspection it looks a little like Pascal, with some assembler mnemonics thrown in for good measure. After a really hard look, you know it's going to be fun.

There used to be good reasons for not mentioning C. Like "it's too expensive" and "no one really uses it on the Amiga". Both these excuses are now invalid, because some very useable C compilers are available in the public domain. At the very least, you'll be able to write a program to say "Hello World".

There have been some snags with the libraries which the C programs need to talk to the outside world, namely Commodore say they're theirs, and no one else can have them.

Alternative PD libraries are now available and included in most PD compilers. (Note: There was a C programmer's joke in the last sentence. I apologise.)

Commercial compilers come with the full set of libraries, and are generally much more fun to be with. You also get some whoppingly huge manuals which will make things a lot easier.

Programming in C is a Good Thing. The code produced is very, very fast and making use of all the Amiga's extra bits and bobs is a relatively simple task.

C is definitely the best language for programming the Amiga, no questions asked. However, it is not a particularly easy language to learn. OK then, at times it's a real pain in the neck.

Aj's opinion: It's wonderful. A real challenge of a language.

High level

Basic

EVERYONE has loaded AmigaBASIC, grimaced and decided that there must be a better way. It's slow, buggy and exceptionally difficult to use. However, it does come free with every Amiga and had a reasonably good manual.

With this in mind, several brave individuals have persevered, and the results are a testimony to their skill. For an example, take a look at Make Money on last month's cover disk. Fast graphics, sampled sound, scrolling screen – it could have been written in machine code.

Other versions of Basic are available: HiSoft and GFA to name two. HiSoft Basic is what AmigaBASIC should have been. It is compiled instead of being interpreted, which improves execution speed considerably.

On a 1 meg system it can also produce "stand alone" code which doesn't require Basic to be resident. An extension library is available to make displaying IFF screens and requestors a relatively easy matter.

GFA Basic is Basic for hackers. Also compiled, it has good support for sprites and general messing around with Intuition. An example GFA Basic program is on the cover disk in the usual place.

Aj's opinion: Nearly everybody knows how to program in Basic because it's not something you forget. It is a terribly un-structured language, showing its age in this age of "Oops" (Object orientated programming). A good way to knock-up simple programs quickly, but not recommended as a way to make your Amiga push back boundaries without immense effort.

Pascal & Modula 2

BOTH these languages have more academic interest than Amiga appeal. I don't want to run them down – I have used both many times – but I wouldn't

consider using them on the Amiga for serious programming.

There was a time when Modula 2 seemed to be the *in* language on the Amiga. For a start, the original version on A68K was written using it. It was soon overshadowed by C, and most programmers defected.

Pascal is a good second language to experiment with after Basic. It's a nice user-friendly, relaxed kind of programming experience and is widely used in universities.

Aj's opinion: There are good versions of both in the public domain, but look as them more as way of learning new languages than learning to use the Amiga. Of course, if anyone would like to prove me wrong, I'd love see some Pascal and Modula 2 Amiga programs.

Amos

SOMETHING of a newcomer, AMOS is the language that would-be programmers have been calling out for. It's based on Basic, so practically everyone will feel immediately at home. Although it was written by the author of STOS, it has been so improved that any similarities are unintentional.

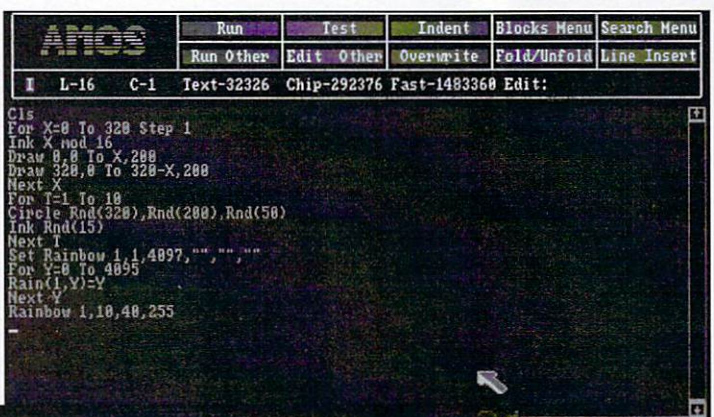
It's about here that the similarities with other Basics stop. AMOS has lots of commands. Lots and lots of commands. Commands for just about *everything*.

Although it's interpreted, AMOS can hardly be described as slow. It's not quite as fast as other compiled Basics at number crunching, but then again, that's not what it was designed to be.

Mandarin don't want AMOS just to be seen as a games creator package, however it is with DIY arcade games where it shines. It has wonderful graphics and animation support, through an interrupt driven sub-set of itself. It will even play Sound Tracker modules.

Serious programmers, and here I mean folks who like knocking up CLI based utilities and 100 per cent Intuition–compatible code, won't even bother to look at AMOS until the compiler comes out to produce stand-alone code. Even then, it will be a look that says "cheat – it took me three months to do that".

Aj's opinion: For the game players who have longed for an easy way to get inside the Amiga, AMOS is what they have been waiting for. If you haven't the time to spend on learning C, this is the one for you.



Even the AMOS editor goes over the top



The results from AMOS have a definite hacker-type feel to them

Programming in C

THE C example comes from Carl Beech from Stoke-on-Trent, and will provide a useful addition to your library of subroutines. It's also a pretty good example of one of the trickier parts of C – passing parameters in and out of routines.

Pascal allows variables to the sent to functions in two ways – read only, or read and write. By using the read only approach, you can keep track of where changes are made and so keep the bug count down. Read and write access allows functions to perform a single task, such as reading a file, to be packaged up out of harm's way.

C tackles this problem by allowing *only* read access.

"But," you may say, "Isn't this a bit limited? Short sighted even?"

"Ah," I say, "But in C we have pointers."

"Oh no," you say, "I hate pointers. They're so tricky!"

And so the conversation goes on. What it means is that to get write access to a variable, you must pass the *address* of the variable into the function. The function can then do what it likes with this address, and one such option is assigning a new value to it. This is how the example listing gets the state of the joystick from the routine.

The joystick reading routine itself is on the cover disk, the listing here is an example which uses the routine to print the direction on- screen.

```
    /* Joystick test routine. Lattice C */
    #include <stdio.h>
    #include <exec/types.h>
    #include <hardware/custom.h>
    #include <hardware/cia.h>
    #include <Library_routines/Joy.h>
/*
The previous routine has been saved in the
user's library, in this example, called
Library_routines
*/
VOID main()
{
ULONG i;
int j_val, dmy;
for (i=0; i<1000; i++)
    {
    j_val = 0;
    Joy (&J_val);
    if (j_val & 1) printf("Left ");
    if (j_val & 2) printf("Right ");
    if (j_val & 4) printf("Up ");
    if (j_val & 8) printf("Down ");
    printf ("%d \n",j_val);
    }
}
```

Programming in HiSoft Basic

MATHEMATICS – don't ya just love it? Well I don't know about you, but I'm partial to a quick mathematical investigation and so is Chris Hellen from Alresford in Colchester. Instead of calculating π to 30 decimal places, he has written a program that will obtain e to as many places as you require.

The program was originally written in 1975, and when running on a mainframe it took 23 minutes to calculate 200 digits. Using AmigaBASIC the same program takes 6.5 minutes.

If you have studied maths to A level, you will have come across *e* as you explored logs and integration. You will therefore know that it is defined using a series, thus:

1 + 1/1! + 1/2! + 1/3! + 1/5! + ...

where ! stands for factorial (for example, **4! = 4 * 3 * 2 * 1)**.

The supplied program will calculate the series to any number of places you like, dependant only on memory and the amount of time you have to spare. It works like this (takes a deep breath):

The first term of the series is placed in both the first and second arrays. From then on the term in the second array is converted to the next term in the series and is added to the first array (which always holds the latest value of *e*).

This first array is compared to the third array. If they are equal then processing stops and *e* is printed out. If they are not equal, then processing continues and the first array is copied to the third.

Finally the next term is calculated in the second array. This technique is quite useful and can be easily adapted to generating other mathematical constants.

The Basic source code is in the Code Clinic drawer on the cover disk, and has been re-written to be totally compatible with HiSoft Basic. As you might guess, using HiSoft Basic speeds things up considerably. Some might say it takes away from the fun...



The program calculates e to as many digits as you want...

Send your clever solutions or techniques to:

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Europa House
Adlington Park
Macclesfield
SK10 4NP

MicroLink: Mag048
CIX: amigacomputing

HELP!!!

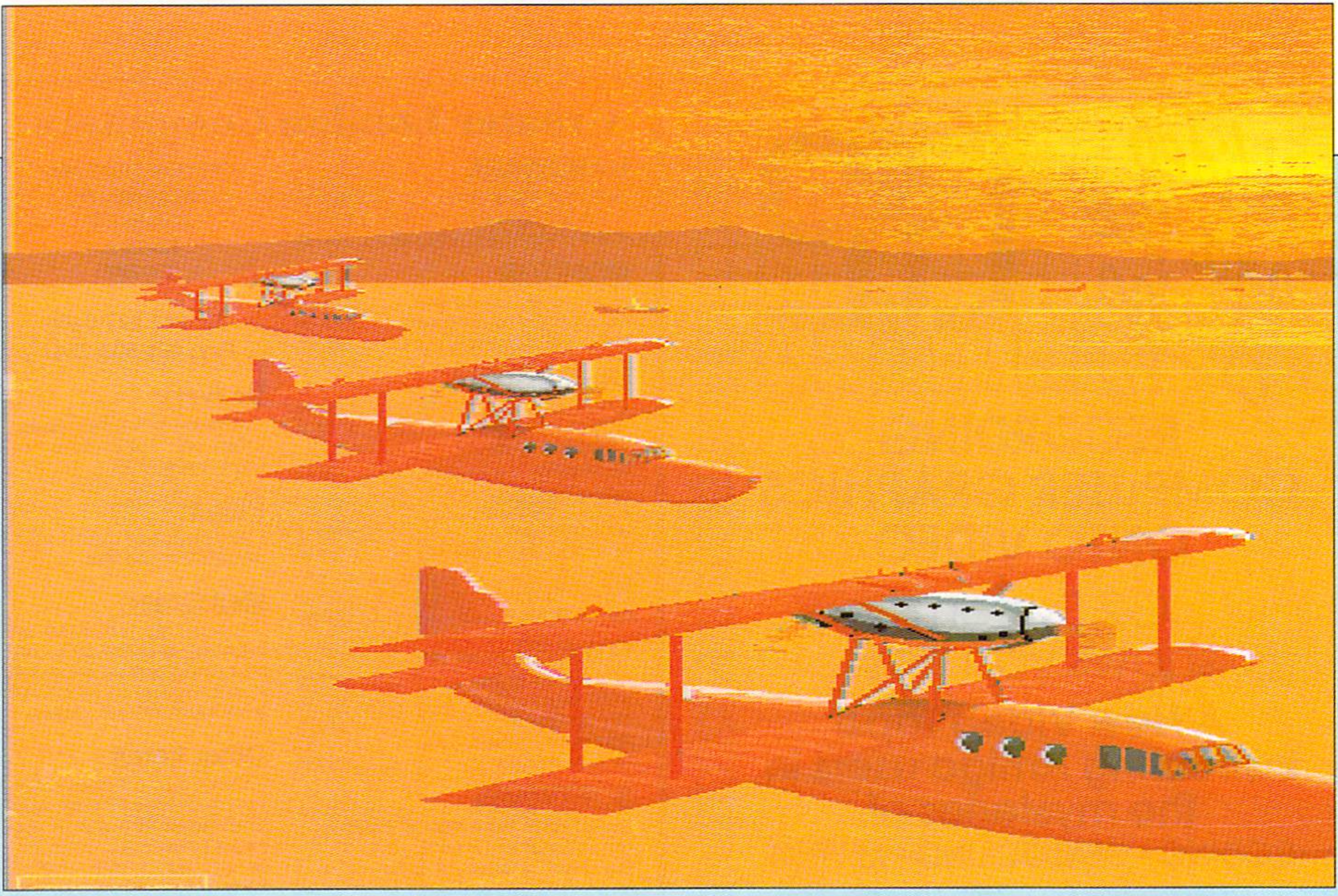
Amiga Computing is looking for some reinforcements to help maintain it's position as the more intelligent guide to the Amiga. We are looking for an enthusiastic Amiga user to fill the position of Staff writer.

The successful candidates would:

- **Have a sound working knowledge of the Amiga**
- **Be able to convey their ideas in an entertaining and informative manner**
- **Enjoy working under pressure and to tight deadlines**
- **Live (or be willing to move to) within travelling distance of our offices near Macclesfield, south of Manchester**
- **Know a good game when they see one**
- **Be able to juggle or unicycle, or at least want to learn!**

If you think you're person enough for the job send in your CV now before you sober up. Please enclose copies of any previous published work and/or 500 words about either a recent game or an interesting technical subject. Applications should be made to:

"Staff writer application",
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Portfolio

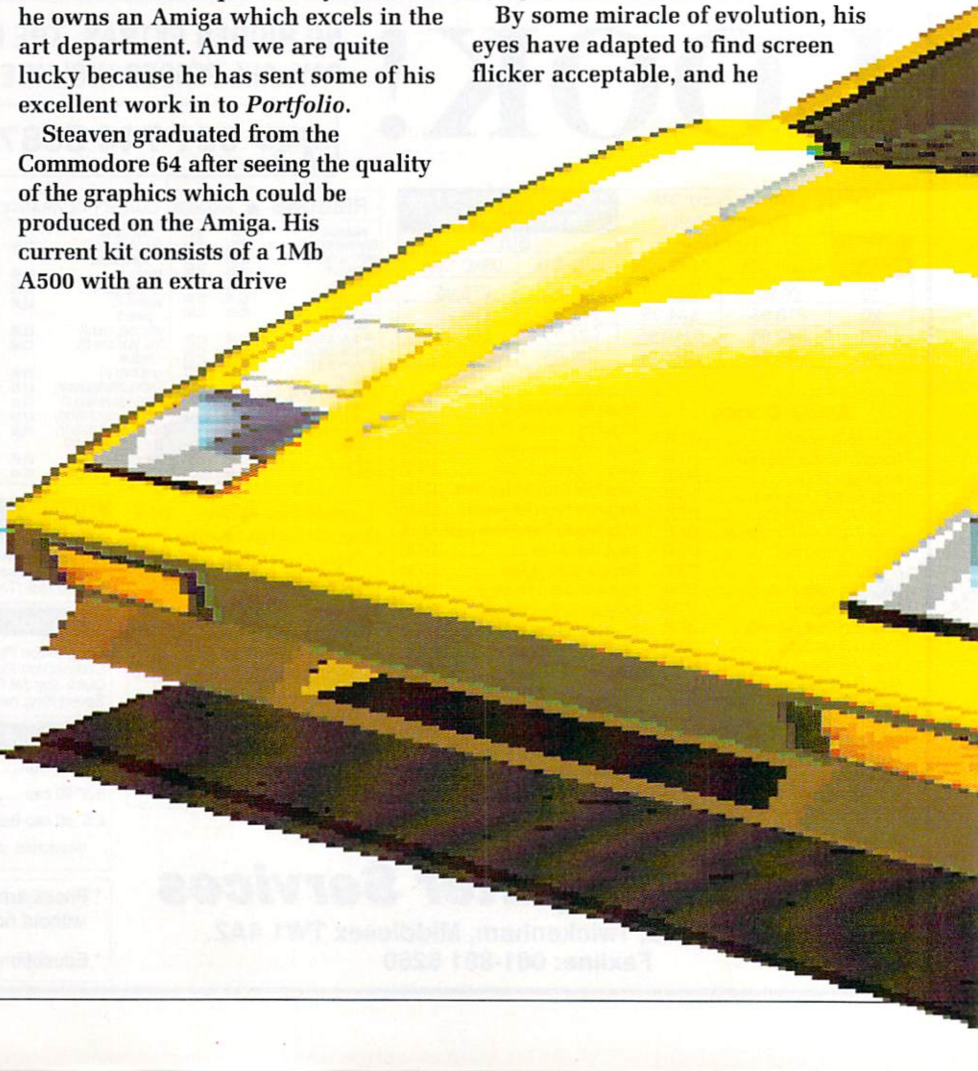
STEAVEN HEPPENER is a 21-year-old salesman from Elland near Halifax in West Yorkshire. He has two main loves – computers and art.

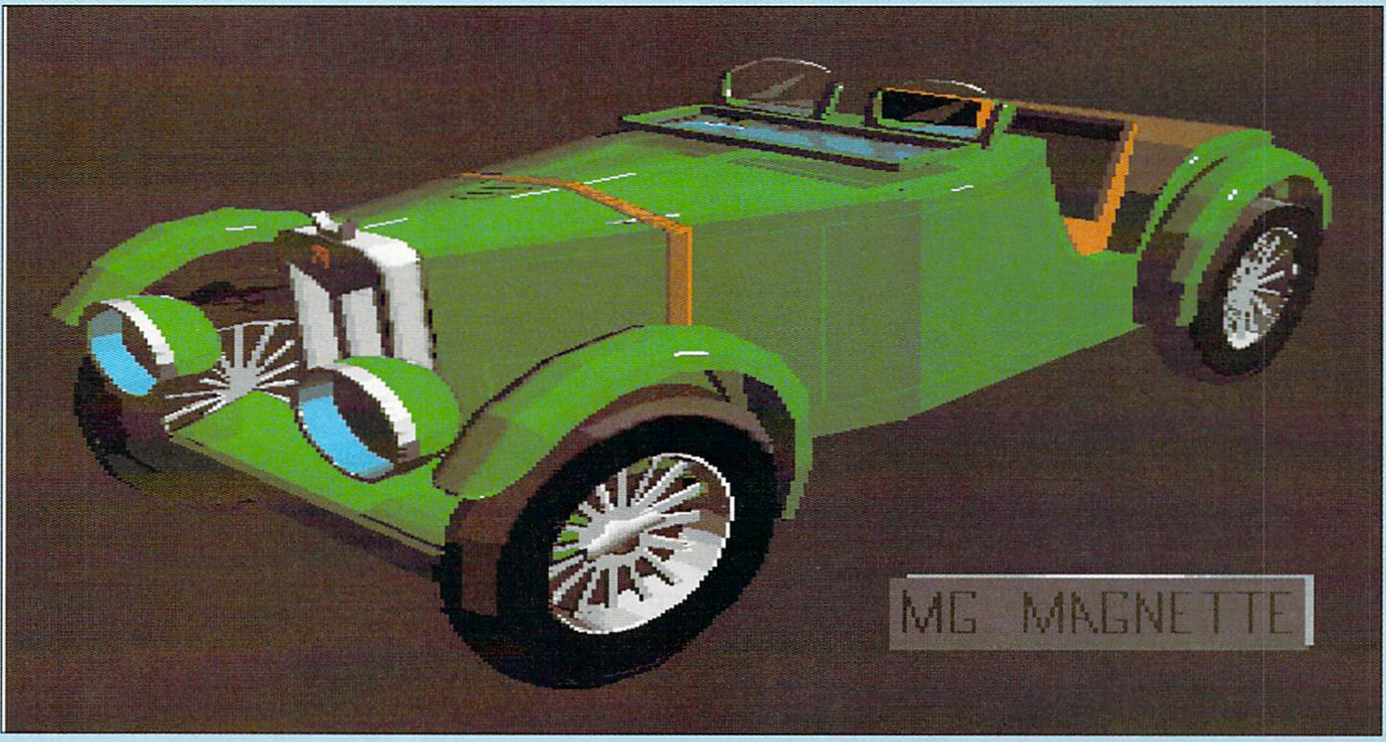
He is therefore quite lucky because he owns an Amiga which excels in the art department. And we are quite lucky because he has sent some of his excellent work in to *Portfolio*.

Steaven graduated from the Commodore 64 after seeing the quality of the graphics which could be produced on the Amiga. His current kit consists of a 1Mb A500 with an extra drive and a standard 1084 monitor. When it comes to software he uses the old favourites Photon Paint, DigipaintIII and DPaintIII. Not a ray trace package in sight!

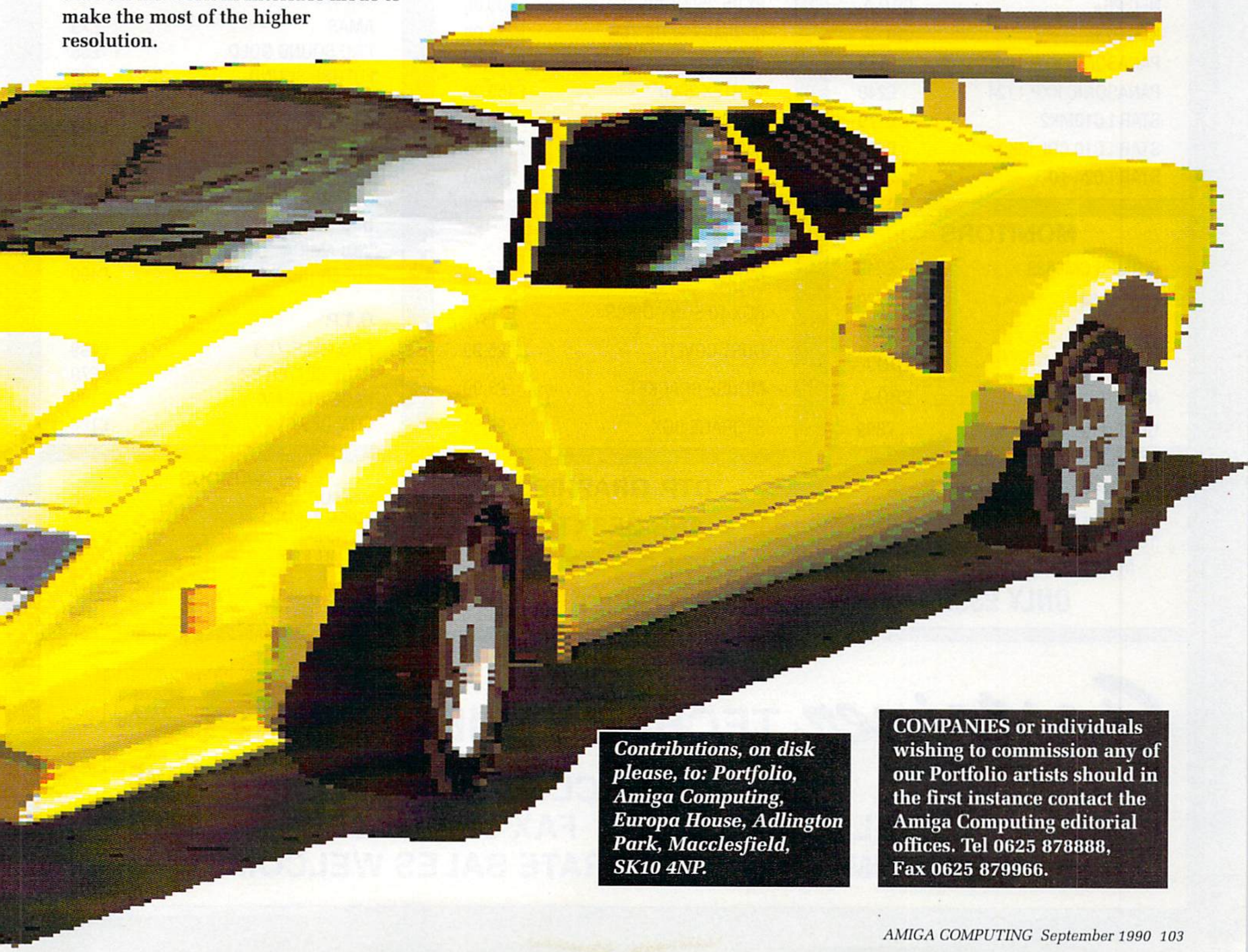
By some miracle of evolution, his eyes have adapted to find screen flicker acceptable, and he







does all his work in Interlace mode to make the most of the higher resolution.



Contributions, on disk please, to: Portfolio, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP.

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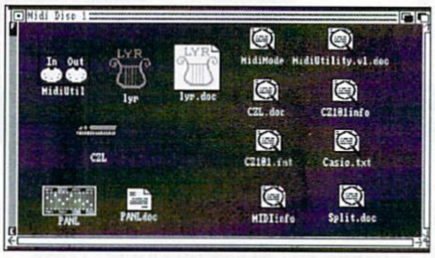
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Magical musical interface

TRADITIONALLY the ST has scored over the Amiga when it comes to music software. This was largely due to the ST's built-in MIDI interface – a brilliant piece of foresight making the ST one the first micros ever to make use of this wonderful standard.

Of course the Amiga was soon to answer back through a veritable plethora of third party interfaces. Thankfully the big C had laid down some ground rules for the interfaces, and so all MIDI software and hardware



seems to work together on the Amiga in perfect harmony. It works so well in fact that the new CDTV (the new combination Amiga-CD player multimedia engine) is the only Amiga to have an integral MIDI interface.

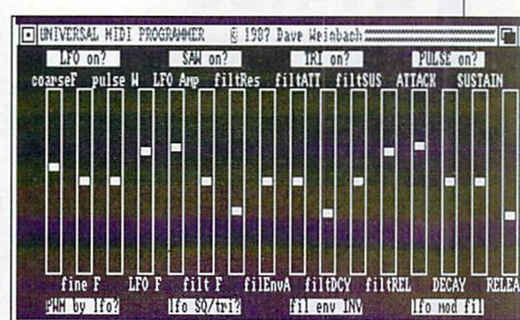
For those not in the know, MIDI is the musical instrument digital interface, and physically takes the form of a set of five-pin DIN plugs. It allows you to connect your synthesiser – be it a keyboard, pretend saxophone or drum machine – to your computer and record the entire epic masterpiece.

As you are recording the control signals that trigger the external musical instruments and not the sounds themselves, you have an incredible degree of flexibility over the editing. Even folks with minimal keyboard skills (like me) can produce compositions which sound at least slightly akin to how they were envisaged.

If you plan on interfacing your Amiga to just one keyboard synth, then you need two MIDI ports: In and Out, to carry signals to and fro. If you wanted to connect further musical bits and pieces you would make use of your interface's Thru port.

The archetypal interface is a small ugly looking black box which connects via a short ribbon cable to the parallel port. It may require external power. It has one In, one Thru and several Outs. It also costs a few bob.

To complement their Quartet sequencer and sample player, Microdeal have released a mini-MIDI interface. It is rather cunningly totally built in to the casing of the 25-way parallel printer plug, and has a pair of



The Microdeal MIDI interface comes complete with a disk of public domain utility programs. This one is a comprehensive MIDI patchbay.

two metre leads for MIDI In and Out.

It conforms to the Commodore standard perfectly well, with full opto-isolating components to buffer all the equipment from nasty things such as floating earth loops. It will, of course, work with any Amiga MIDI package, not just Quartet.

It's small, compact, reasonably cheap and ideal for Amiga owners just bitten by the MIDI bug.

John Kennedy

The Microdeal MIDI interface costs £29.95 and is available from Microdeal on 0726 68020

Protect and survive

YOU don't need to be told what nasty things viruses are. The scourge of all Amiga users, they can be a real pain in the neck. No, worse than neck. I'll go further. They are a pain in the backside.

Only last week I received a visit from the deadly Lamer virus. A momentary aberration - I switched VirusX off for a reason that made good sense at the time - and the next thing I knew several text files had gone missing. Several important text files. That I needed. Were gone. I was annoyed.

For this reason a hardware device which plugged into the back of the computer and stopped the little beasties dead in their tracks was something I was immediately interested in.

The way it works is quite simple: It prevents the bootblocks of the floppies from being written to, therefore stopping the virus from spreading. If something tries to write to that part of the disk, AmigaDOS gets that Write Protect feeling. Useful? You bet!

Drawbacks? 'Fraid so. For a start, there are a small number of viruses which don't live in the bootblocks, so you can never guarantee complete freedom from the blighters.

The other problem concerns the design of the device itself. Because it stops *everything* from writing to the bootblocks, you may find problems when you want to legitimately write to that part of the disk. For instance, when you want to format a disk.

For this reason there is a switch to toggle the device on and off, and an LED to tell you what state it's in. So whenever you need access to these forbidden disk sectors, you just flick a switch.

I see a danger here. Remember at the start I got rid of VirusX but forgot to run it again? What was to stop me switching off the hardware widget, doing the biz and then forgetting to switch it on again?

Well nothing. Except the little red light. Hopefully it is more noticeable than a message in the screen title bar.

The Vaccine unit is best seen as another line of defence. With it plugged in (switched on) and VirusX running from a startup-sequence, I can begin to feel confident that my computer isn't going to tell me something wonderful is about to happen.

John Kennedy

The Vaccine virus protector costs £19.95 from European Peripheral Distribution, 0602 841640

Reader offers

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Together both programs would usually set you back almost £100, as a special offer to Amiga Computing readers both programs are available for just £69.95.

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Is a comprehensive guide to the Commodore amiga's disc Operating System (Versions 1.2 *and* 1.3). It provides a unique perspective on this powerful system in a way which will be welcomed by the beginner and the experienced user alike.

Rather than simply reiterating the Amiga manual, this book takes a genuinely different approach to understanding and using the Amiga and contains a wealth of practical hands-on advice and hints and tips.

The many features of this book include:

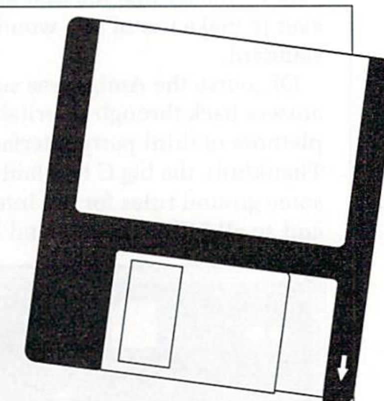
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Day by Day replaces your manual system for diary, business organiser, notepad, planner, reminder and so on.

It's suitable for both business and home applications, including numerous useful functions which serve every requirement.

It's suitable for both business and home applications, including numerous useful functions which serve every requirement.

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Among its many features are:

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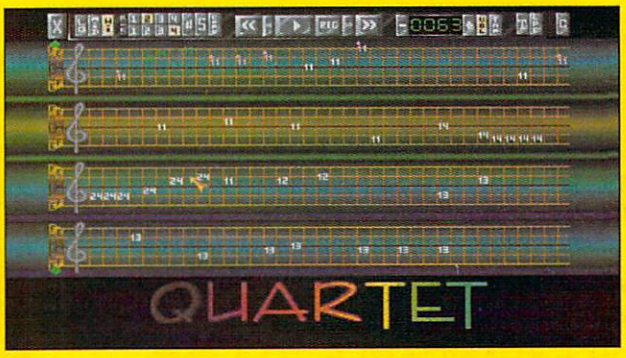
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QUARTET



Make beautiful music on your Amiga

Quartet is a stunning sequencing package that will allow you to compose anything from a jingle to a symphony.

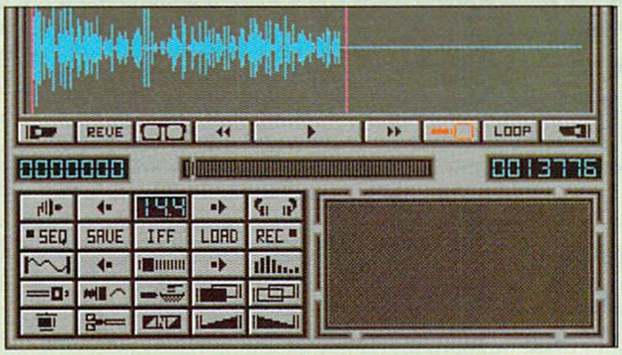
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What's more, Quartet is MIDI compatible, so you can connect a suitable keyboard or synthesiser to enter notes directly.

It's the ideal sequencer package to complement the excellent Master Sound sampler

- Amiga Computing, August 1990

Quartet comes with full instructions and two disks for £49.95



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(see page 110)

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(see pages 108/109)

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AMC9

Virus Hex



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At first you think you can handle it – "So I do a few jugs now and then, so what? I could give it up any time I wanted – couldn't I?"

It starts slowly. First three balls, then four and five. You move on to clubs. You learn inverted cascades. You start mucking around with fire-clubs, diablos and devil-sticks.

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And who gains from it? Satan himself, under the guise of one of his alter egos, purveyor of quality juggling equipment to the unsuspecting. In a perfect world this business would be illegal, but in the spirit of Thatcherite free enterprise these peddlars of addictive implements go unpunished.

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